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UNDER THE ROOF OF THE JUNGLE

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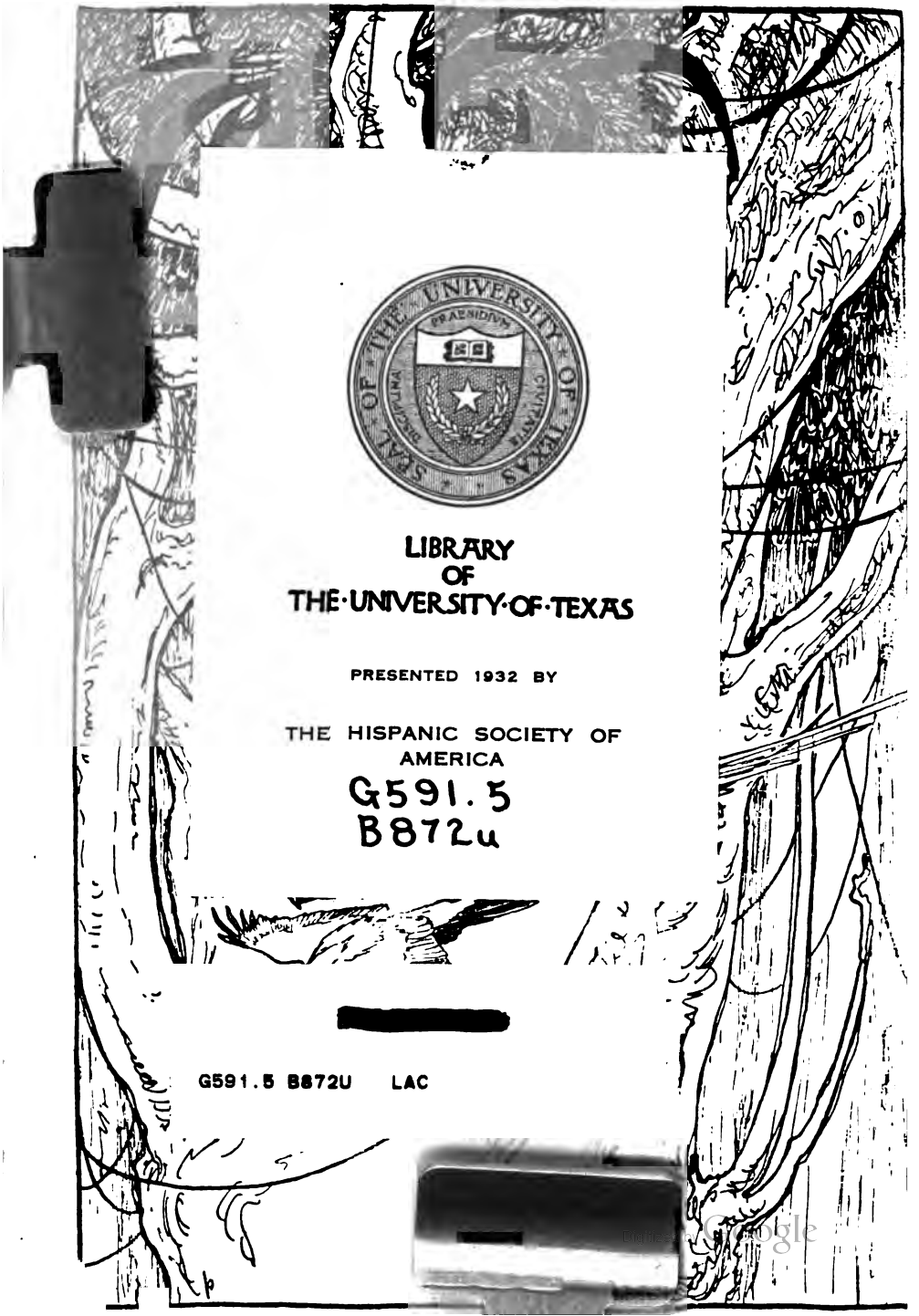
CHARLES LIVINGSTON BULL



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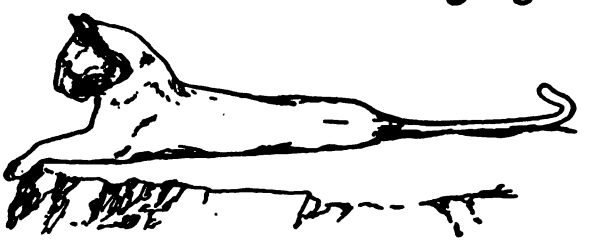

A Book of Animal Life in the Guiana Wilds

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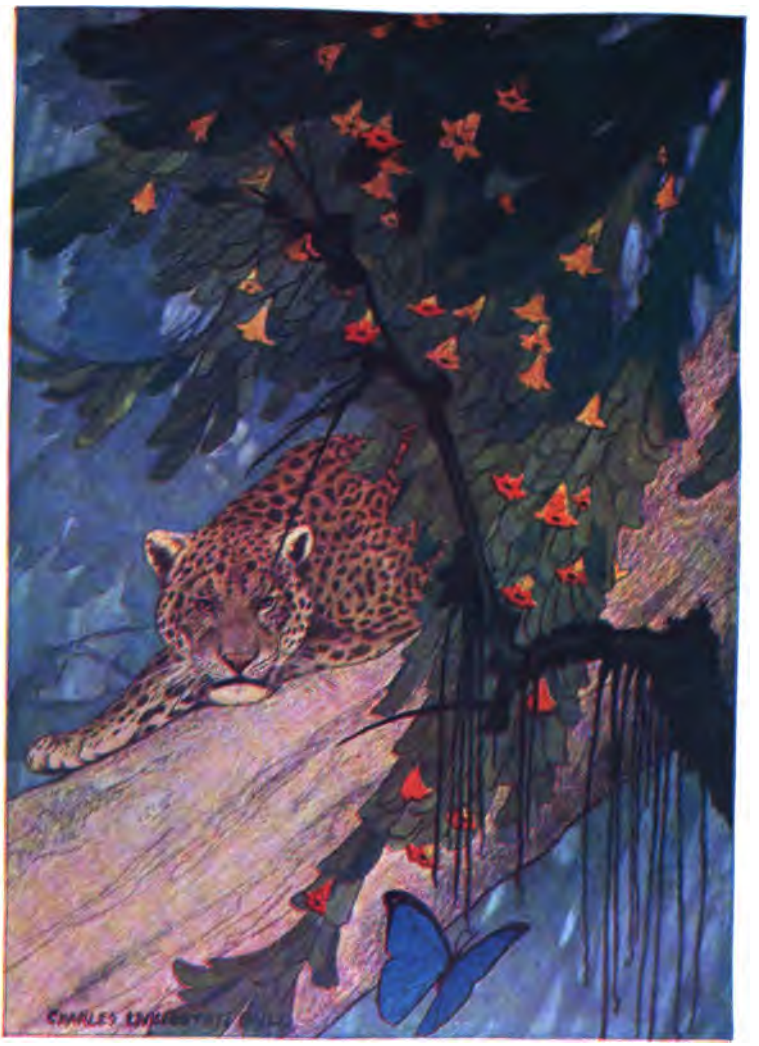

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Under The Roof of the Jungle

A Book of Animal Life in the Guiana Wilds

BY

CHARLES LIVINGSTON BULL

With sixty full-page plates and many minor decorations from drawings from life

BY

THE AUTHOR

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Preface

ONE hundred years ago Charles Waterton, a sturdy old English squire, wrote a most enjoyable book describing his adventures in British Guiana, and when, recently, I found a copy in a library, I was filled, after reading it, with a great desire to follow his quaint advice, which was somewhat as follows:

" Courteous reader, here thou hast the outlines of an amazing landscape given thee; thou wilt see that the principal parts of it are but faintly traced, some of them scarcely visible at all, and that the shades are wholly wanting. If thy soul partakes of the ardent flame which the persevering Mungo Park's did, these outlines will be enough for thee: they will give thee some idea of what a noble country this is; and if thou hast but courage to set about giving the world a finished picture of it, neither materials to work on, nor colors to paint it in its true shades, will be wanting to thee."

My soul " partook " and I " had the courage," as this book will show, to make at least an attempt to to follow his advice. I went to Demerara well

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equipped with sketch books and color box and wandered through the jungle, the splendid, colorful, weird, living jungle. I sailed far up and down the great rivers, stopping at different points to make detailed studies of the truly " amazing landscape " and those strange and remarkable creatures which dwelt therein. I watched silently by the hour at the foot of a great cashew tree, the fruit of which was ripe, and have seen the timid wild things come stealthily forth from their hiding places, attracted by the strong odor of the fallen fruit.

I climbed up among the tangle of lianas and vines and rootlets into the very " roof of the jungle," and still higher to where I could look out; and watched " the sun set over the jungle: " and the birds and beasts and reptiles of the day disappeared and the night wanderers came forth.

I did very little shooting, for I have always found much greater interest in watching the actions of the live creatures than in the study of their dead bodies.

I have tried to fill in a few of the more plainly marked " outlines " and possibly even a few of the " shades " of the " amazing landscape," and herewith present in story form fourteen bits of detail.

CHARLES LIVINGSTON BULL.

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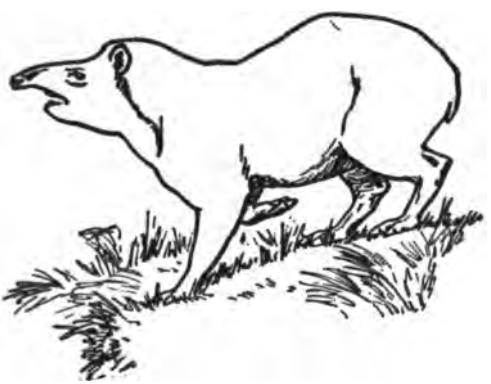

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"HE SPRANG INTO THE AIR, BOTH FOREPAWS OUTSTRETCHED."

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the point. As they came over him, not more than seven feet above his head, he sprang into the air, both forepaws outstretched, and clutching one of them, dropped back into the grass.

The other big duck went quacking wildly away down the stream. Wasting no time, the famished jaguar speedily devoured his catch, leaving nothing except a few feathers. Though a large bird weighing ten or twelve pounds, the duck made a rather light meal for the jaguar, and when it was finished he again crouched, hoping to be able to repeat his success.

The sun was now well below the horizon, and the stars were beginning to appear.

The evening flight of birds was past, save for a few stragglers scattered over the wide savannah. Occasional bats fluttered back and forth, snapping up such insects as their wonderful tiny eyes could discern. An owl sailed out on silent wing from his hiding-place in the near-by jungle and went floating away, seeking such water-mice and rats as might come within range of his great eyes.

Away back in the jungle a band of howling monkeys sent forth their weird, unearthly night-song, and a chorus of the big, blue tree-frogs filled the air with loud, hoarse croaking. A tiger bittern

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stretched out his long neck, and sent forth his guttural chuckling note. Then one by one the noises ceased, save for the incessant drone of the cicadas and other insects.

After a time, low in the east there came a faint glow, and then the waning moon sailed slowly up, casting a soft light over the quiet savannah and sleeping jungle. The jaguar, weary of waiting in the water, straightened up, and, after looking sharply around in every direction, threw up his head and sent his sharp, coughing roar reverberating over the wide wastes. It echoed and re-echoed from the jungle wall behind him, and finally died away.

He listened a moment for any possible answer or the sound of any fleeing, fear-stricken creature which the roar might have startled, but hearing nothing, he turned away and went back through the grass and in among the trees, leaving the savannah to the owls and the moon. Some hours later he was picking his way along a sandy ridge — perhaps two miles from the edge of the savannah — through a big clump of small palms, the sharp, thorny fruit-pods of which, dried and hard, nearly covered the ground. He was stepping very carefully in order to avoid pricking his feet, when a

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slight movement a little at one side caught his attention.

It was a large tortoise, black save that each of the plates of the shell was marked with a small yellow spot in the centre and the scales of the fore limbs were of a bright orange pink. It was just heaving itself up out of the sand where it had evidently been buried. As it slowly emerged the sand slid off its sides and back, disclosing a length of about twenty inches, sixteen of which were taken up by the long, high-domed shell. With a couple of easy bounds the jaguar was upon the big tortoise, which instantly drew in its head and feet. After biting at the hard, smooth dome a few times and turning it over with his paw, he realized that this would be no easy problem. He picked it up in his big jaws and stood looking about for a spot free from the thorny fruit pods. Suddenly he dropped the tortoise and began sniffing at the sand where it had been buried.

Here he began digging, scooping out the sand with his big, round forepaws. When he had gone for a foot or thereabouts, he uncovered a heap of thin-shelled white eggs. He quickly scooped them out and ate them all, more than forty of them. Then, after digging about in every direction to

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make sure there were none left, he again turned his attention to the poor mother tortoise whose nest he had rifled. She had just thrust her head a little way out to see if the coast was clear, but quickly withdrew it as the big, spotted cat again picked her up and walked carefully away among the thorny pods. Coming to a space which was free of them, he dropped down, and, taking the tortoise between his forepaws, he began gnawing at the hard shell. Failing to accomplish much by this method, he inserted his powerful claws in the space where the scaly feet were drawn in, and found a spot where the skin was fairly soft. Tearing and digging, he ripped out first a foot, then the head, and soon after had completely cleaned out all the soft parts — leaving nothing but the hard, bony shell.

His appetite satisfied, he strolled away through the jungle, heading for the great, flower-covered log in the windfall. The dawn broke when he had yet some distance to travel, but he cared little, for the jungle floor is well shaded, and he might chance to pick up something more in the way of small game.

Just as he was leaving the sand ridge he came upon a number of large holes or burrows which

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slanted down into the sandy soil. He sniffed about the entrances until, hearing a rustling noise, he looked up and saw a big, blackish lizard with whitish mottlings crawling slowly up to the entrance of one of the burrows. The big cat sprang for it like a flash, but even quicker the lizard darted into the hole. With the commotion a number of other lizards came scurrying out of the surrounding jungle, making for the burrows, and, one of them coming straight toward him, the jaguar crouched to meet it. When it came within eight or ten feet it stopped short, and again the big cat sprang. Again he missed, for the tegu, as it is known to the natives, darted to one side and made for another of the holes. Not to be defrauded, the cat sprang again, and succeeded in clutching the long, thick, pointed tail just as the reptile dashed into the burrow. As his claws sank into the scale-covered tail, the tegu gave a jerk and a shake, and the jaguar was left in possession of the detached tail, which the lizard had intentionally snapped off in order to save himself. The jaguar, snarling with rage, chewed the still wriggling tail to bits and departed.

It is most remarkable to observe the speed at which these big reptiles can cover the ground. De-

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liberate, almost lazy, for the most part they creep sluggishly among the tree roots, stopping to eat the soft, tender young leaves and shoots of the big arums, cannas and other quick-growing, luxurious tropical plants. Or, moving a little more swiftly, they snap up a fat worm or grub or a nest full of eggs or young birds. Occasionally one of them will, by a quick leap, catch one of the little rodents which are everywhere in the jungle, and, killing it with a few bites and shakes, will ravenously gulp it down. But when it is threatened by one of the big killers — jaguar, ocelot, tyra grison, or that big stork, the jabiru, any of which would like right well to make a meal of its tender white flesh — the tegu can develop a speed most surprising, hurling its big heavy body over the ground at a rate which renders it safe from most of its enemies. It often attains a length of four feet and a weight of twenty pounds.

A few days later the jaguar was following a band of chattering, black spider monkeys among the branches, trying to get within good springing distance. The monkeys, however, were very restless, and went on and on, swinging from branch to branch, their long prehensile tails and slender, attenuated limbs enabling them easily to cross spaces

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"THE RUSH OF A BAND OF FRIGHTENED SPIDER MONKEYS."

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which the great cat found impassible. In order to keep himself from being seen the jaguar was obliged to make wide detours around these spots. He tried circling wide to get ahead of them and to find some great limb whereon he might lie in wait, but when he returned to their line of march he found that they had just gone by.

He was just giving them up in disgust, when they came upon a long boa-constrictor, which was climbing through the branches of a big greenheart, and with shrieks of fear they stampeded back in the direction from which they had come. The jaguar crouched flat on the great branch upon which he was climbing when he heard the shrieks, and watched one of the marvels of the jungle, the rush of a band of frightened spider monkeys.

The curiously attenuated creatures would bound from a branch, catch a vine perhaps fifteen feet away with their forepaws, swing under it, and hurl themselves, feet first, through the air to the next liana, a possible twenty feet. Catching this with hind feet and tail, they would swing under it in the same manner, and go sailing through the air head first to alight on a big branch. So they went, twenty of them, dashing along in a bewildering series of great leaps, swings and dives, never miss-

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ing their aim, never misjudging a distance or the strength of a branch or vine; their seemingly reckless plunges always landing them at the right spot, they literally hurled themselves sheer through the jungle.

One of them flying toward the crouching jaguar caught with its forepaws a liana a good twenty feet away and, swinging under, shot out and down, landing on its hind feet on the great branch not three feet in front of the big cat. In a flash the jaguar was upon it, striking it down almost before it had landed, and gripping it in his powerful jaws, while the rest of the band went rocketing past with fresh screeching as they beheld the capture of their comrade.

After feasting heartily the jaguar went rambling away through the treetops, and came accidentally upon the big boa which had so alarmed the monkey band. The boa had but recently shed his skin, and was most brilliant in his new coat. Having fasted for the two weeks following his last meal, he was hungry.

About twelve feet in length, he was thick and muscular, and looked, as he was, a most formidable antagonist. The jaguar watched him rather uncertainly for a few moments, then with a low growl

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advanced, more from curiosity than any other cause.

Catching sight of him, the great snake threw itself into a coil, secured a good grip on a big branch with its tail, and drew back its head.

Walking slowly out on a big branch, the jaguar leaped lightly over to a limb of the tree on the branches of which, near the trunk, the big snake was coiled facing him. Coming down the limb, he stopped when he was yet four or five yards distant, and sat down upon his haunches to see what the reptile might do. The big snake remaining motionless, the cat arose and came yet nearer. When he had come to within about six feet the great snake slowly raised its head and four or five feet of neck slightly above and back of the mass of its coils, forming a long S-curve with the neck. It drew in a great breath, swelling visibly, and then, slightly opening its mouth, it sent forth a loud, long-drawn, sibilant hiss, almost like the exhaust of a small engine.

The cat paused, then suddenly seemed to lose his temper. His ears dropped flat, and his lips were drawn back, baring the teeth, as a savage growl, harsh and hoarse, rumbled up from his thick and muscular throat. Half crouching, he drew

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nearer still, with one forepaw raised to ward off the attack which he knew would come. Louder hissed the snake as the enemy approached. Suddenly, quicker than human eye could follow, he struck; but the cat was prepared. As the head of the reptile flashed at him, with his well-armed paw, he struck the snake squarely on the side of the head. His claws, backed by the awful force of his powerful forearm, tore off the whole side of the reptile's head. Dazed and blinded, the boa struck wildly again and again, but the cat had no difficulty in parrying, and, darting in, bit and tore at the lithe, muscular coils.

As he landed on the snake it threw one of its coils around his neck. Had not the boa been blinded and partly disabled by the awful blow, the jaguar could not have lived two minutes in this grip; but as the coil whipped around his neck the torn head swung within reach of his powerful jaws and was crushed to pulp. Even in death the muscular contraction continued, and the cat was terribly choked before the coils loosened and the writhing body slowly lost its hold on the branches.

The jaguar had a narrow escape from falling to the ground far below, for he was much shaken by the choking and barely managed to save himself

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by catching a big limb with one forepaw. The limp, writhing body of the snake slid from branch to branch, finally dropping sheer from the lowest limb to the ground, many yards below. The jaguar, quickly recovering his equilibrium, climbed down after the body, letting himself down the long, smooth trunk backward as a cat comes down a pole. Sniffing at the still writhing carcass he bit several mouthfuls out as though he would try the flavor, then, lying down and tearing open a section of the glassy, scaly skin, he dined sumptuously, finding the white, flaky flesh not unlike that of the fish he loved so well.

Coming to the bank of the stream another afternoon he climbed a big tree, and walking out upon a branch overhanging the water, stretched out in great content to wait for the setting of the sun. As he lay there a flock of toucans came flying into the branches over his head and scolded and barked all about him, craning their long necks and great, curious beaks to watch his every move. Not long after they had gone a splendid pair of macaws flew into the tree just above him, their gaudy red and green plumage making a startling splash of color in the picture. While these were screeching and yelling at him at the tops of their raucous voices

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a flock of green amazon parrots joined them and added their piercing screams to the harsh chorus. The jaguar, seemingly unconscious of their presence, paid not the slightest attention to their noise, but seemed to be absorbed in watching the gyrations of a pair of big, satiny blue morpho butterflies chasing each other about just below him.

The parrots soon lost interest in him, but the two macaws hung about, gradually flying nearer and nearer, scolding away with most ear-piercing cries. Finally the jaguar leaped up and struck at one of them as it sailed screaming past his head, but he misjudged the distance and only struck the outstretched wing of the big, noisy bird. Though the wing was crushed by the force of the blow, he could not clutch the bird, but instead it fell, sailing through the air to the water below. The jaguar started to descend the tree, but was disgusted to see a disturbance in the water as the jaws of a small cayman or crocodile opened and, gripping the struggling bird, disappeared with it beneath the surface.

Descending from his lofty branch, the big cat stood on the bank for a time, hoping the cayman might appear and that he could get a chance at it. The cayman, however, knew that he was no match

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for that big spotted brute on the bank, and well satisfied with its good luck in getting a dinner so easily, remained in hiding.

As the sun sank over the jungle the cat started down stream toward the savannah. Coming to its edge he waited a moment, listening, before turning his steps toward the point where he captured the big duck. A distant snapping of twigs somewhere across the stream caught his ear. Entering the water, he swam easily to the other side. The jaguar is almost unique among the cats in that it will swim streams or rivers which are too wide and deep to cross in any other manner.

Coming out on the bank he shook himself violently, spattering the water in every direction, then stood motionless, listening intently.

Soon again he heard the sound of snapping twigs and swishing leaves, and he trotted silently toward the spot from which the sound seemed to come. As he drew nearer, he slowed to a walk, picking his steps with the greatest caution, his body flattened until it just cleared the leaves and twigs which covered the ground. Suddenly catching sight of a movement behind a screen of leaf-covered vines, he stopped short, keeping absolutely motionless as a tall swamp deer walked out into the open. It was

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about the size of a large sheep, but with the long slender legs of all the deer of the north. The head was shorter, and the nose more blunt than that of the northern deer, but the coloring and markings were quite familiar. It was a young buck, crowned with forward-curving antlers, each of which was armed with a single sharp prong.

The buck stepped cautiously forward, his big bright eyes, broad ears and keen nose always on the alert to warn him of any danger which might threaten.

As he passed behind the high buttressed roots of a huge tree, the jaguar darted forward and crouched, tense and waiting, at the side of the tree farthest from that where the deer had disappeared.

On the instant the antlered head came into view he sprang. Though the deer dodged and bounded to one side, it was not quick enough, and the jaguar, catching it by the haunches, pulled it down and, clutching its head with his powerful forepaws, dislocated its neck with a sharp twist. Almost as soon as it fell the jaguar had ripped open its throat and sucked the gushing lifeblood.

The following night he came again to the carcass of the deer and nearly caught an ocelot which had been stealing a feast, and which had barely escaped

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"THE BIG CAT FOLLOWED THE SMALL ONE AS FAR OUT ON THE BRANCH AS HE DARED."

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by darting up a tree and taking refuge on the tip of a branch which would not hold the enraged jaguar. The big cat followed the small one as far out on the branch as he dared, and stood growling and snarling at the ocelot for a few minutes, then, the odor of his venison proving too attractive, he descended to his feasting. The ocelot watched him until he arose, yawned and stretched, licked his paws, and with them cleaned his face just as a house cat might. Then with a last long look at the little spotted cat sitting at the tip of the branch, the big cat strolled away to the stream for a drink. The ocelot kept his position for a good half hour, fearing lest the big cat might return, and then went cautiously away through the branches, not daring to come to the ground until he had put nearly a quarter of a mile between himself and the remains of the dead deer. Then most cautiously he crept back until he was within sight of it, crouched on a big root, and watched it for a long time.

Finally a little woolly opossum came stealing out of the darkness, and, creeping up, began to help himself to scraps of the flesh. This was too much for the ocelot, and he rushed up to the carcass and sprang upon it, snarling and bristling at the opossum.

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He had no desire to attack it, for this opossum is protected from its enemies by a most nauseating odor; but the demonstration caused it to beat a hasty retreat, and the cat, forgetful of its late encounter with the rightful owner of the meat, proceeded to stuff to the entire satisfaction of its entirely healthy appetite. Not until nearly morning did he desist, and somewhat later when the little opossum returned there were not many of the better parts left. However, the ratlike little creature was not at all particular, and soon made a hearty meal. Then as the day broke there came the vanguard of a great horde of the army ants, the scavengers of the jungle, and soon there was nothing left but a pile of bones.

On the following night the jaguar again came to the spot, and found a prehensile-tailed tree-porcupine gnawing at one of the bones. Paying no attention to the irritable little beast, the jaguar sniffed about for a little, then went away to the stream and walked out on a log to try the fishing. After it had crouched there motionless for some time, during which no fish had come within striking distance, the big cat heard quick steps on the shore behind him, and, whirling around, saw a family of capybaras walking nervously down to the water's edge.

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Like a thunderbolt he sprang among them, striking right and left, knocking one flat, with a broken neck, ripping a long tear in the side of another and springing upon a third as they all stampeded, diving into the water and disappearing instantly. The one with the torn side managed to escape into the water, but the jaguar had killed two, and the great rodents, each as large as a well-grown pig and weighing at least fifty pounds, would make him several good dinners. That night he feasted royally.

When he returned to his prey the following afternoon he was stopped by a long hiss and a rustling in the leaves beside one of the dead capybaras. He leaped back and looked to see what had made the sound. There, coiled close beside his prey, was a large snake. Fully as long as the boa he had recently slain, it was not nearly as massive. On the contrary it was rather slender, and the handsome markings of deep, velvety, blackish brown diamonds on a ground color of reddish yellow, combined with its graceful, sinuous form made it a most beautiful, though sinister creature. The rustling sound was caused by the tip of its tail, which was vibrating rapidly among the dead leaves, causing a sound not unlike the whirring warning of a rattlesnake. The jaguar instinctively hesitated to attack the rep-

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tile, but his recent triumph over the boa had dulled his caution, and he was young and experienced. After watching it a few moments he arose, and, snarling wickedly, advanced.

The tail of the big reptile vibrated faster and faster, sounding a warning as he approached, but the spotted cat, proud of his great strength and quickness, and mindful of the fine, fishlike flavor of the boa, came on undaunted. Now the body of the serpent slowly swelled and the long hiss sounded again and yet again, as the head and neck arose in the S-curve. Now the jaguar raised his paw, but still the snake did not strike. The cat stopped, his muscles quivering. Then he sprang.

As he flew through the air the head of the terrible bushmaster, greatest of the poison snakes, flashed to meet him. The long fangs stabbed deep into the big cat's chest, and, as he bit and tore at the flashing, elusive coils, he was bitten again and again.

In less than a minute the jaguar staggered, as the injections of the awful poison coursed through his veins on their way to his heart, and the big snake, torn and bleeding, but, owing to its great agility, not so badly hurt as one might suppose, writhed from under its fast weakening enemy.

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The cat arose, stumbled and fell, rose again, walked, reeling drunkenly, for two or three steps, and fell again. Rapidly the powerful venom did its work, and the jaguar, struggling faintly, succumbed, seeming to go gently to sleep.

Within seven minutes from the time when he was first struck the jaguar was lying dead, and the great bushmaster, indeed master of the bush, fearing nothing in all the jungle save the marching phalanx of the army ants, crawled away to his den under a great root to hide until his wounds should heal.

Slowly the sun sank in the west. The orange light tinged the jungle roof for a few minutes, then died away. A star gleamed out, then many more as the night came on. From a near tree-top the weird night song of the howling monkeys came swelling forth like a mighty dirge. The jaguar had paid the debt he owed to the jungle. Many lives had he asked of it, — now his own was forfeit.

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The Black Witches

of the Savannah

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"THE SHRILL SCREECHING OF A PAIR OF GORGEOUS MACAWS."

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The Black Witches of the Savannah

IT was a hot spring morning in the far interior of British Guiana. Where the dwindling green jungle gave place to a broad stretch of grassy savannah, a brown river wound its way out of the forest fastnesses into the sun-steeped plain, skirting at its point of emergence a small knoll crowned with trumpet trees. From the edge of the jungle various bird notes drifted upon the sultry air, the harsh complaining cry of the kiskadi flycatcher and the shrill screeching of a pair of gorgeous macaws punctuating the liquid melody of a colony of black and yellow cassiques. The river, brimming its banks and here some sixty or seventy feet wide, flowed stealthily, its coffee-colored water giving no sign of the strong current save where a fallen leaf was carried swiftly along. When, instead of a leaf, some blundering insect touched that quiet surface a strong swirl and a gleam of silver bore witness to the life lurking in those brown depths.

As the sky showed the first fluffy white clouds that heralded the daily downpour a flock of twenty

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small black birds appeared upon the scene, foraging along the line where jungle and savannah met. With wide-spread rounded wings and tail, they advanced in short slow flights, each flight consisting of ten or twelve wing beats and a thirty or forty foot glide. These were the black witches of the savannah, known to naturalists as the groove-billed ani, and believed by the Bovianders, or natives of the interior, to cast the evil eye. Even modern skepticism must admit they "look the part" as they sit humped up like little dusty, black, sharp-clawed, hunchback witches. Their keen, wicked little eyes peered here and there on the lookout for some nest from which to steal eggs or nestlings, or for the hiding place of some little lizard or tree frog. Their sharp, inquisitive beaks were curiously grooved, their black plumage loose and fluffy, and their toes set like those of a parrot or woodpecker, two forward and two back.

They were very deliberate in their movements, sitting quietly on a branch for a few minutes after each short flight, apparently careless of danger. But when a hawk, with half-closed wings, dropped like an arrow from the blue, they darted with such surprising quickness into the dense grass and underbrush that their thwarted enemy retired with

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loud, discordant querulous cries. The black witches, apparently undisturbed by their narrow escape, resumed their leisurely, observant progress from tree to tree.

Meanwhile the clouds had thickened and presently the sky grew suddenly dark and the daily rain came sluicing down, quickly drenching the jungle and savannah. At the first spatter the black witches took shelter beneath the broad leaves of the trumpet trees and stood humped up, tails hanging straight down, waiting.

It was the season of the "big rains," and for several hours each day the rain poured down with great violence. Under these downpours the rivers would overflow their banks and the savannah would be covered with standing water to a depth of several inches at the foot of the tall grasses. It was the season which answers to spring in our northern latitudes, the season of nesting birds, of opening flowers and fresh leaves. In these Guiana wilds there is no time when the trees lose all their leaves at once as they do in the northern winter, but most of them cast off a few at a time, the old leaf being forced off by the swelling bud at its base.

After a time the rain ceased and the sun came out hot and blinding, setting the drenched jungles

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and savannahs to steaming so that a soft mist rose which slightly tempered the great heat. The black witches, drenched like everything else, came from their various hiding places and flew to the branches of a small etabally tree which was covered with brilliant golden yellow flowers just opening to their greatest expanse. There they sat till their wings and tails, spread in the bright sunlight, were partly dried, when they once more went lazily hunting among the trumpet trees.

Their wanderings now brought them to the little knoll mentioned in the beginning of the story. On this knoll, in a nest of matted grass and weeds under a clump of small trumpet trees, lay a tapir calf not more than two days old. Vividly blotched and striped with cream-white the little piglike creature was in striking contrast to the big slate-gray mother which stood beside it. Having just been suckled the calf was resting in profound baby contentment. One of the black witches soon discovered the hiding-place of the tapirs and gave a low call which brought the rest of the flock sailing and flapping lazily into the trees above them. Here the evil birds seemed to hold a silent conclave, posturing and peering, and turning their heads from side to side as they watched the mother and offspring

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"TWO OR THREE OF THEM WOULD FLY TO A TWIG JUST ABOVE THE LITTLE CREATURE."

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with much interest. After a little they scattered to hunt for food, but kept the tapirs well in sight.

Even when night came these curious birds found sheltered perches close about the little knoll, selecting the slender stems of big broad leaves too frail to bear up any of the many night prowlers which they had cause to fear.

Not once the next day did the black witches lose sight of the tapirs. When the mother went down to the river for a drink a few of them attended her, sailing from bush to bush behind her and occasionally flying down into her tracks to pick up worms or insects which her steps exposed. Sometimes they even alighted on her broad back for a moment to snap up the big carnivorous flies which were ever flying about her.

Most of the birds, however, kept near the calf. They seemed to be waiting for something. Two or three of them would fly to a twig just above the little creature, and turning their heads from side to side would look at it with first one then the other of their wicked little eyes. Huddling together, shaking their wings and flirting their long tails, softly snapping their beaks, they seemed to be silently mouthing some wicked incantation. Then they would peer away out over the savannah or

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back through the jungle, as if they were expecting the appearance of something; and at each strange sound over in the jungle one or more of them would fly away to investigate. Soon they would come back and sit about, humped up, waiting, waiting.

For four or five days more they kept their watch. On the afternoon of the second day one of them found the well hidden nest of a blue tanager. In spite of all the protesting cries of the mother bird, the black witch snatched one of the nestlings and carried it to the knoll. Flying down beside the tapir calf, it proceeded with great deliberation and cruelty to snap the leg and wing bones of the nestling, and as its struggles grew feebler pulled the little bird slowly to pieces and devoured it. A little later the same performance was repeated, and then again, till there were no more of the nestlings. Each time the victim was brought down beside the calf, which watched the uncanny meal with its round unknowing baby eyes.

The calf was daily growing stronger, and would soon be able to trot after the mother when she went for a drink or down into the savannah looking for fresh shoots and tender leaves.

It could now stand quite firmly, and in its waking hours its long nose was constantly working and snif-

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fing and its big ears and eyes were busy taking in new impressions; but naturally, it spent most of the time in sleep.

There were many visitors to the little knoll, for the great jungle fairly teems with life; most of them, however, were much too small to be a menace to the calf, helpless though it was. Once a deer came walking lightly by and almost stepped into the nest before it noticed the spotted calf. Then it stopped abruptly, sniffed the air, and slowly approached, coming nearer and nearer with outstretched nose till it almost touched the little creature, when it switched its tail, turned aside, and walked on out into the savannah.

A little later two of the black witches, while sitting watching and waiting over the little tapir, heard a sound a little way back in the jungle, and quickly flying to see what it might be, found a small band of peccaries, those quarrelsome, saucy little black jungle pigs. With a great fluttering of wings and noiseless working of beaks they hopped and flew along in front of the pigs as though they were trying to guide them to where the calf was lying, but by the time the knoll was reached the mother tapir was standing beside her offspring, and the pigs, like the deer, passed harmlessly by.

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On two successive nights a big brown coati-mondi came waddling on flat bearlike feet along a fallen trunk up to the edge of the nest, its long inquisitive nose wrinkling and sniffing and its long barred tail high in the air ; but it was only mildly curious, and soon went away through the brush, seeking some sleeping bird or unwary lizard or agouti.

One afternoon a little band of pretty gray sacki-winki monkeys came bounding and racing through the trumpet trees, leaping from branch to branch, with never a miss or fumble. At sight of the baby tapir they stopped short, gathered close together, and with many shrill chirps and whistles seemed to hold an earnest consultation, gesticulating and grimacing; but their interest was short-lived and they were soon off on their wild race through the jungle.

Many birds — trogons, cassiques, motmots, cotingas, tanagers, flycatchers, and hawks — came to the little knoll, hunting and hunted, and paused for a few moments out of curiosity, or, perhaps, lingered under the leaves for the passing of the daily rain. But always the witches watched and waited!

About a mile away upstream, near the bank of

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"A BIG BROWN COATIMONDI CAME WADDLING ON FLAT BEARLIKE FEET."

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the little river in the dense jungle of monster liana-tangled trees, grew a great greenheart. Its flat buttressed roots, thrusting out from the trunk twenty feet above ground, formed between their walls recesses ten or fifteen feet deep. Across these roots on one side of the greenheart had fallen the trunk of another big tree. Weakened first by a violent wind storm which had torn out its topmost branches, then quickly attacked by termites and vegetable parasites, it had succumbed to the united onslaught, and had come crashing down among the trunks, tearing and smashing, till it settled down on the upper edges of the flat arched roots.

The creepers, lianas, arums and orchids were quickly at work covering the great wreck with a mantle of vines, roots and foliage, and colonies of termites and wood-boring beetles were soon drilling cavities in the dead and dying wood. The vines and creepers crept about over the trunk and supporting roots till they formed a roof over the spaces below. In the cavity between two of these roots a female jaguar had found a secure, well-concealed retreat, and here on a bed of dead leaves were sprawled two clumsy, pudgy, playful cubs. Spotted like their mother, their big round heads and thick legs and paws were as different in form from an

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African leopard cub as a puppy bulldog is from a kitten; but their beautiful color and markings gave them certain resemblance to their old-world cousins.

It was early in the night and they were both asleep, for their mother had just left for her nightly hunting. She had first gone to the river for a drink and had paused on an overhanging root in the hope that one of the fish which she could see swimming about might venture within reach of her lightning stroke. But either the fish were too wary or there was no inducement to tempt them near. Next she went down stream along a faintly marked trail till she came to a leaning trunk stretching across the trail at a height of seven or eight feet. Leaping lightly upon this she stretched out flat and waited with all her senses alert for the slightest movement. In a short time the alarm her approach had created among all the little jungle creatures in that immediate neighborhood subsided, and emboldened by her absolute silence they began to come forth. First a dead leaf moved and a sharp nose and a pair of bright eyes appeared, and after some time the form of a tiny opossum, no larger than a mouse, crept out for a moment, then disappeared again in renewed fright as a bush rat rushed across the trail and a large bat floated among the trees. Next a

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pair of agoutis, as alert and graceful as tiny deer, darted about among the dead leaves and seed pods.

A rustling of the leaves and a steady careless tread a little way off between the trees caused the big cat to stiffen her muscles and to gather for a spring, but when she saw it was but a small armadillo she sank back with a silent snarl of contempt. Likewise when one of the black prehensile-tailed tree porcupines climbed slowly up a huge liana suspended within a few yards of her, she merely watched it with curious half-interest.

Once, when from the top of a nearby forest giant she heard the weird night song of a band of howling monkeys, she looked about sharply for a few moments, seeking a sloping trunk or big vine which would afford an easy means of approach; but seeing none, and the howling suddenly ceasing as though the monkeys had been startled by something, she settled once more into her ambush. She had long since learned that waiting usually wins a better reward than stalking.

Some time afterward from far down the trail she heard many little hoof beats approaching. But just as her keen nose told her that it was a band of peccaries, the sound of their hoof beats stopped and they stood grunting and sniffing. Then there was

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absolute silence for a time, and at last she realized that the pigs had stolen away. So carefully had they gone that not a twig had snapped to tell of their retreat. Then the jaguar stood up, growling softly, leaped to the ground, and stole quietly away among the tree trunks.

Back at the den between the roots the spotted cubs had slept quietly for a time. Then one of them stirred, blinked and sat up suddenly sniffing the damp night air. The movement awoke the other, and it, too, sat up, yawning and stretching. Catching the same odor, it stiffened into attention, all its senses alert.

Presently they heard a faint, scraping sound as of something being dragged slowly over the ground. The sound came perceptibly nearer, ceased for a few moments, then came on again. The faint odor which had first caught their attention was growing stronger, and the two kittens cowered back into the farthest corner of the den with a whimper of instinctive fear.

Nearer and nearer came the sound, till it seemed just outside the entrance. There it ceased, and a flat, blunt head appeared and slowly, very slowly, was thrust into the den, followed by foot after foot of scaly, glistening, mottled body. It was the big

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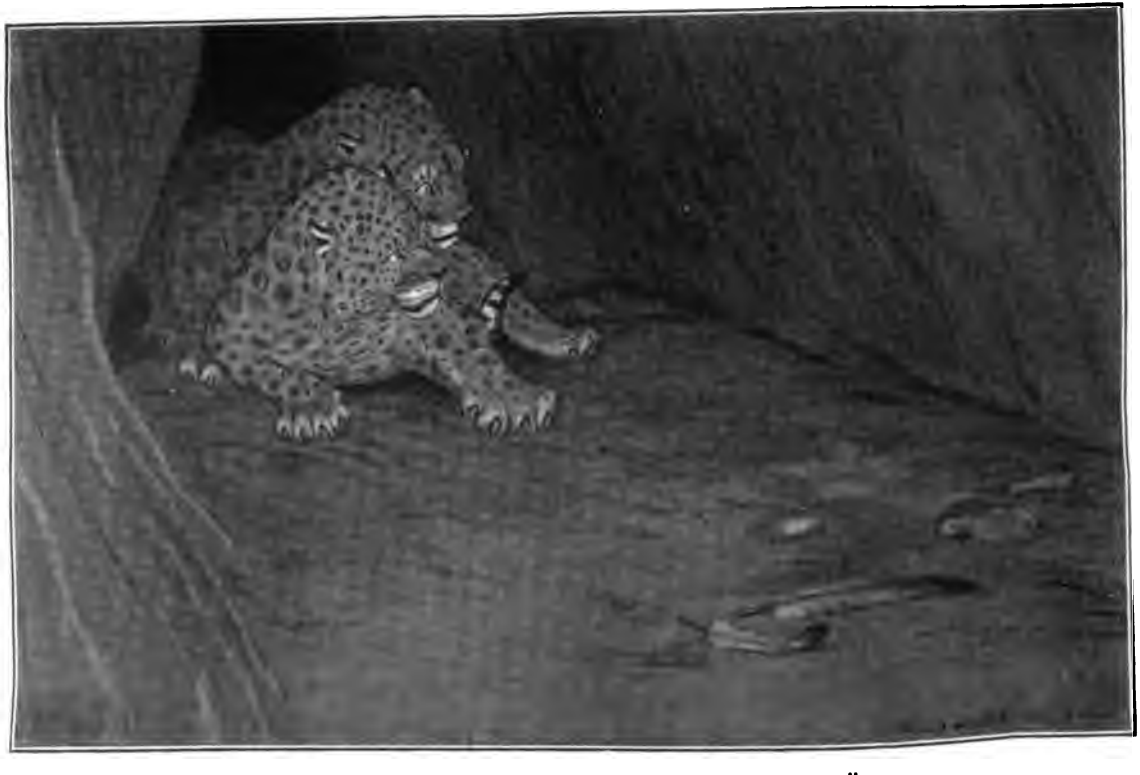

"COWERED BACK INTO THE FARTHEST CORNER OF THE DEN."

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anaconda, or water boa, which had just shed its old skin, and, having fasted for nearly two weeks since its last meal, was very hungry. The two spotted kittens spat and growled and bristled bravely in their corner, but their bravado was of no avail.

The big snake paused, drew back its head, and settled itself in great coils. Suddenly, with a motion so swift that no eye could follow it, the flat head darted forward and back, and there was but one kitten cowering in the darkness. The other was but a crushed shapeless mass completely hidden beneath the folds of the great body. The second kitten met the same doom. The tragedy was mercifully swift, and in a short time the great snake left the den, slowly returned to the river, slid quietly in, swam across, and crept under the overhanging roots of a great tree. In a cavity in the roots it coiled up, and fell into that dormant, full-fed torpor which is as near to sleep as the unwinking reptiles can approach.

Far down the river the mother jaguar hunted silently through the night, but without success. Just at dawn she came near the little knoll, and a light breeze carried the faint odor of the tapirs to her keen nostrils. With twitching tail she crouched

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a moment, then, even more silently than before, crept up the wind toward that most enticing odor, nearer and nearer, till at last she could see the slaty mass of the big tapir through the dense foliage. Slowly she gathered her feet together under her, treading the ground lightly with one paw after the other. A slight quiver of the tense body, a lifting of one fore paw, and the jaguar sailed through the air in one high, long, curving leap. A good twenty feet she sprang, alighting beside the tapirs, and on the instant was tearing and rending at the tough skin and thick neck muscles of the mother.

The big tapir struggled to her feet and, dragging the biting, clinging jaguar, rushed for the river, knowing instinctively that the water was the only thing that could save her. Crashing through the bushes they went, and the low growls of the jaguar were the only sounds save the snapping of the twigs. Coming to the bank of the little river the mangled tapir stumbled in. At the sudden shock of the cold water the jaguar released its hold, and, snarling angrily, scrambled back on the bank, and turned to watch its escaping prey.

The tapir, relieved of the awful biting and tearing weight, quickly reached the deep water and started

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"THE TORTURED ANIMAL REARED HALF OUT OF WATER."

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to swim across. But before it reached midstream its blood-stained wake eddying down stream carried a message to a myriad waiting creatures, and at once the water fairly boiled about the unfortunate beast, and darker bloodstains smeared the brown flood.

The tortured animal reared half out of water, struggling and floundering, while leaping over and around her appeared hundreds of bright, silvery fishes from fifteen to twenty inches in length — the dread perai or caribes, of all the northern rivers of South America.

The jaguar stood on the bank growling and snarling, whimpering and trembling as she saw the fishes tearing the tapir to bits, for well she knew that no living creature once wounded could ever cross that stream. Soon the struggles of the tapir ceased and its lifeless carcass was carried under. Slowly the red ripples quieted, and the brown water flowed smoothly on as before.

For some time the jaguar stood watching the water. Then turned and went back over the trail it had so shortly before helped to smash through the brush, stopping here and there to sniff where a clot of blood had spattered on the leaves.

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Then came the black witches with fluttering wings and strange mouthings to meet her, hopping excitedly from branch to branch out of reach of her quick stroke. As she came to the knoll she suddenly stiffened to attention and as suddenly sprang forward.

When she had first attacked the mother and been dragged away in the mad rush she had not noticed the baby tapir lying on the other side of its mother, and now as she caught sight of it standing staring in bewildered wonder down the track where its mother had so strangely disappeared, she sprang forward with an eager, savage growl. One blow of her powerful fore paw crushed out the life of the helpless little creature, and she crouched beside it feasting at last.

Around and overhead hovered the black witches, gloating, mumbling, fluttering. When the satisfied jaguar had picked up what remained of her prey and started off through the jungle, they flew down to the ground and eagerly snapped up the bits of flesh and clots of blood sticking to the leaves. Over the larger pieces they performed strange antics, hopping up and down with drooping wings and spread tails, at times tipping back their heads and working their mouths in what seemed silent, ribald

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laughter. After a time when there were no more clots remaining they flew up on the branches, preened their feathers, and started once more on their wayward, uncertain, lazy flights along the edge of the savannah.

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A Song in the Night

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"THE SOFT TROPICAL NIGHT WAS FILLED WITH THE NIGHT SONG."

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A Song in the Night

THE soft tropical night was filled with the night song, the weird, wonderful chant of the Howling monkeys. The frogs, toads, birds and jaguar had played a prelude, their discordant, harsh tones blending together in a not unmusical whole, serving to prepare the ear for these wonderful performers whose rich organlike notes swelled out, filling the night, making the very air vibrate with their strange melody.

They started high and clear, full and soft, like the longdrawn high note of a wolf howling at a distance, holding this note for perhaps ten or fifteen seconds, then the song slowly, smoothly dropping down the scale for about four full tones without a break, swelling with a great crescendo till the lowest note was like the mighty chord of a church organ.

This low note was held for a few seconds, then slowly rose to the original high note, diminishing as it rose, till it was again the thin minor cry of the wolf pack singing to the moon. This high note

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was again held for ten or fifteen seconds, and then once more dropped into the grand crescendo; then up, to repeat the entire performance over and over, with no perceptible break, for perhaps twenty minutes, when it would begin to waver and break, as some of the band would weaken and drop out. Then with harsh, forceful grunts the leader would start them all up afresh, and once more the tremendous song would peal forth.

The second outburst would last for no more than eight or ten minutes, and though the big red leader would beat and grunt the chorus would soon die away in soft mutterings. Perhaps an hour or two later the great wave of sound would again well up, but from a different point in the jungle, for the monkeys always travel between songs, seeking trees with ripe fruit or hunting insects or birds' eggs as they go. Were they to stay in a tree-top long after the finish of their song it would be an easy matter for their enemies, the puma or jaguar and the big noiseless boa, to find them, stealing upon them among the branches.

Near a stream which winds its way around the base of a rocky hillside, deep in the heart of Guiana, a monster palm thrusts its great head above the top of the surrounding jungle. To this palm just

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at dusk came the band of Howling monkeys, twelve of them, one old male, the chief of the band, a fine orange-red fellow with black face and paws and mahogany crown and beard, and three old females, his wives, one of which carried, clasped tightly to her breast, a tiny baby monkey almost hidden by the long hair on her body.

There were also three young females, one of which was not more than half-grown, and four young males of different ages, from a little fellow, not much larger than the youngest female, up to a husky big fellow who was beginning to dispute the authority of the leader, and who had several times been put down with a strong hand and sharp teeth. He would soon, however, commence the fight in earnest. Then would follow a battle for the mastery, and the loser would have to flee for his life, perhaps to form a band of his own, or, alone, to be snapped up by a boa or puma, for that is the usual fate of the monkey alone in the jungle for any length of time. Many eyes make for safety, and a single pair, though assisted by a wonderfully keen nose and ears, are not enough to keep the lone Howler protected for any length of time.

Coming to the big palm, the leader led the band up the rough trunk to the crown, sat down on one

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of the big leaf stems, threw back his head, opened his mouth and the first faint, hardly perceptible note of the night song stole forth. The others quickly joined in and the song swelled out in all its great volume.

Not the booming of the ostrich, or the roaring of the lion has the bigness, the vibrant strength of this sound. Only the trumpeting of a herd of elephants might exceed it. An extraordinary development of the hyoid bone is responsible for the power these monkeys have to boom out their weird solemn notes — a development unique in all nature. This hyoid bone gives the throat a curiously swollen look, and a thickness which seems out of proportion.

The leader of the band was about as large as a good-sized bull terrier, and the biggest of the young males was nearly as large. The old females were somewhat smaller, being not larger than big house cats, while the youngest female was not more than half as large. Their tails were prehensile and of great use to them as they swung along among the tree-tops, leaping from branch to branch or running along the great vines which stretch everywhere through the jungle, forming aerial roadways for the people of the tree-tops.

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"LATER THEY ENCOUNTERED A KINKAJOU."

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The little band kept up their song for about twenty or twenty-five minutes, then swung down, and went rambling off across the jungle roof, hunting for insects, nuts or ripe fruit, repeating their song every hour or two. Toward the end of the night they came to a great cashew tree whose fruit was just ripened, and here they had a great feast, paying no heed to the myriad big bats fluttering about, quarrelling and fighting over the luscious, acid plumlike fruit.

Later they encountered a kinkajou, a curious, woolly, catlike creature with long prehensile tail, flat bearlike feet and big nocturnal eyes. It was crossing an aerial bridge consisting of a huge liana swung across an open space. It bounded across to a big branch, ran down and crouched with its back to the tree trunk, growling, hissing and snarling as the monkeys passed along the liana. As they did not molest it, it ceased growling and watched them with much interest, and after they had passed on it followed them at a little distance, for nearly quarter of a mile.

Just before dawn the monkeys were crossing a more open section of the jungle, bounding from branch to branch, when one of them screamed out in wild fear, and bounded sideways, missing a

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branch and falling nearly twenty feet before he could catch another.

The entire band scattered like a flash, but soon returned most cautiously to see what had so frightened their comrade.

They gathered slowly around, and the frightened monkey pointed out with many wild screeches and gesticulations a big mottled tree-boa lying coiled up in a fork of the tree. As the boa appeared to take no notice of them they gradually drew nearer, grinning, and showing their teeth in rage. The boa, the arch enemy of all the monkeys, made not the slightest movement, even when the band threw sticks which struck his beautifully mottled coils, for well he knew that they might grow overbold and come within his reach. Fortunately, the day broke bright and hot, and attracted by their racket, a great jaguar which was prowling near came stealing up among the branches; one of the monkeys, catching sight of him, set up a wild cry, and the entire band dashed up to the tops of the trees, and away.

The monkeys went racing away over the tree-tops for a long distance, then recovering from their fright, they came to a lower level and a slower pace. They were soon hunting insects and birds' nests as carelessly as though there were no perils in all

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their experience, for they have very short memories and many adventures, and nothing makes a lasting impression on their shallow brains.

While one of the young males was hunting roaches, he disturbed a colony of the poisonous red ants which make their homes among the aerial roots of orchids and pay for their lodging by defending the beautiful plants from the insects which would otherwise destroy the flowers. The ants at once swarmed to the attack and the monkey bounded lightly to a near branch and watched them as they swarmed up and down the limb upon which the orchid was growing, seeking the disturber of their fortress.

Quickly tiring of this sport, he turned away, and came face to face with a tree-porcupine. The curious prehensile-tailed rodent bristled and gnashed its teeth, but the monkey was not in the least frightened and he began to tease and annoy the porcupine, jumping up and down, shaking the branch sharply to dislodge it if possible. Finding this of no avail, he broke off a short twig, and proceeded to belabor the porcupine, which turned its back to him and tucked its head between its front paws. Finding no resistance, the young Howler grew bolder and bolder, finally reaching out and

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clutching the naked tip of the prehensile tail. He gave it a sharp jerk, then he went closer and gripping the tail with both paws, jerked harder. At this instant the porcupine jumped backward, and the hands and arms of the Howler were pricked deep by many of the tiny barbed quills. Yelling with fright and pain, he fled, trying to bite the quills out of his arms. The others gathered around him grimacing and gesturing, helping him to extract the little quills, picking them out with their fingers and teeth.

As they travelled among the trees one of them came upon the big nest of a curassow, a large black turkeylike bird. The female was upon the nest brooding the two large white eggs, and when the monkey came bounding along the big black bird ruffled her feathers, swelling up to nearly twice her ordinary size and pecking sharply at the marauder. The monkey drew back, for the big bird, as large as a full-grown turkey, had a strong sharp beak and could deliver a very severe blow. The curassow is probably the largest bird, aside from the great harpy eagle and a species found in the Philippines, that lives among the tree-tops, and is the only one of its family known to nest in trees. The shrill chattering of the monkey quickly brought the rest of

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"THE CALL WAS QUICKLY ANSWERED BY A NUMBER OF THE BIG BLACK BIRDS."

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the band to the attack and they swarmed around, threatening the big bird from every side. The curassow rose, standing over her eggs, and fighting off her assailants with blows of her wings and beak, uttering loud clear whistling notes of alarm.

The call was quickly answered by a number of the big black birds, which came flying and whistling through the network of branches and vines. The monkeys, finding themselves outnumbered and not relishing a real fight, quickly fled, followed for some distance by the angry birds; the mate of the hen whose nest was attacked, was especially persistent, flying at and pecking fiercely one after another of the fleeing monkeys.

The little band often came across the nests of trogons, motmots and cotingas, which were all easy of conquest, and eggs or nestlings were eaten indiscriminately. Through the heat of the day the monkeys slept, hiding away in the dense foliage of some great trees. But at sunset, away they would start through the forest, searching for fresh adventure.

And always an hour or two after dark they would begin their song, repeated at intervals all through the night and, occasionally, on dark cloudy afternoons.

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Thus they spent their days; many little conquests, many little alarms and a few great ones. One monkey incautiously exploring a hollow in a dead branch, encountered a big amazon parrot nesting within and nearly lost two of his fingers from the attack of her sharp powerful beak. Another day the whole band spent hours in teasing and picking at a sloth, an inoffensive, defenceless creature that hung suspended beneath its branch, occasionally uttering its plaintive cry, and waiting quietly until its tormentors should cease their petty tortures.

Occasionally they would have a trial of speed with one of the small red squirrels of that region, but they were never victorious, for the squirrel would detect their approach in time to find safe retreat in some hollow branch. Or perhaps the whole band would join in a race with a pair of the slender, long-armed black spider monkeys. But here again they always met defeat, for though the Howlers were splendidly active and great jumpers, the spider monkeys far excelled them in agility, easily keeping just out of reach and seeming to delight in tantalizing and teasing their pursuers.

In addition to the snakes, pumas and jaguars, the little band have a mighty enemy in the great harpy eagle, the most powerful of its species, with the

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"THERE THE OLD BIRD ALIGHTED."

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longest talons and strongest feet and legs of any bird of prey. One morning as the monkeys were scattered among the branches of a big wallaba, eating the unripe beans, one of these huge birds, sailing silently through the jungle, espied them. With a few strong strokes of its broad round wings, it shot forward and snatched one of the young males, piercing him through and through with its powerful talons, then bearing away its dying victim to the top of a great greenheart, where a huge mass of sticks and branches, perhaps ten feet across, and at least five or six feet in thickness, was heaped up to form a nest. In the slight hollow on the top were two downy awkward nestlings. There the old bird alighted and proceeded to tear the monkey to bits with its powerful hooked beak and feed it to the eaglets. The platform was strewn with the bones of sloths, monkeys and birds, the odor from which permeated the forest for some distance, a loathsome warning to all the lesser jungle dwellers.

At the first scream of the stricken monkey, the rest of the band instantly disappeared, hiding under branches, in clumps of leaves or behind tree trunks; then as the screams died away, they came forth with soft plaintive calls and fled far from the scene of the tragedy.

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But tragedies of any sort make but slight impression on monkey minds, and the same evening they were gambolling and frisking among the vines and lianas as freely as though they had never heard the menacing swish of the great eagle wings.

One rainy night, just before dawn, as the monkeys finished singing from the top of a big greenheart tree there came, faint and soft, from far away over the jungle, an answering song. They listened quietly while the howling continued, the old leader occasionally grunting angrily and showing his big teeth in savage grimace. Then when the singing ceased, they wandered on not directly toward the answering song, but in an irregular course to a point in the jungle to one side of where the singing party might be. About an hour later, in the gray misty dawn, they gathered together and again their great song or howl pealed forth.

Before it was finished there came a swishing of branches near them and an unknown big, savage old male Howler, followed by three scrawny females, bounded into the next tree. There they stopped and, bunching together, sent out an answering howl, harsh and savage.

There were only four of the newcomers and their song lacked the volume of the original band.

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"FOR A FEW MOMENTS THEY SAT REVILING EACH OTHER."

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Their song lasted only a few moments, then the leader, who had lashed himself into a fury, with grunts and mutterings, came bounding across the branches. All the young males in the band bristled and sprang toward him, stopping, however, some yards away, apparently awed by his size and ferocious aspect.

The leader of the band with a savage bark sprang after the young males, and when they hesitated he bounded past and stopped, face to face with his enemy. The latter was larger in every way, with longer beard and crown and shaggier hair.

For a few moments they sat reviling each other, rolling up their lips to show their great teeth, then the newcomer sprang to the attack.

They clawed and bit and scratched for a few moments, then sprang apart. Once more the newcomer charged and once more they tore at each other, the newcomer catching the hand of the leader and biting two of the fingers clean off. In spite of the band leader's good grip on his shoulder, the enemy proved the better fighter, forced his adversary under and finally secured a grip on his neck which would have killed him if he had not succeeded in wrenching himself free. Down he fell through the branches, weakened from the loss of

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blood. The newcomer stood on the branch watching him, coughing savagely, and then when the crashing branches closed over the vanquished, the successful fighter turned to the younger males. As he advanced, they retreated, having no desire to face so redoubtable a foe. He followed them slowly for a little, then, as they retreated, he dashed viciously after them, sending them scattered and flying before him.

At last he returned to the females of the new band, calling to his own at the same time.

For a little the former tried to evade him, but intuitively recognizing his power and remembering the downfall of their own leader, the older ones soon submitted to his advances, and when he started the great night song first one, then another, joined in till they were all helping to swell the crescendo with their powerful voices.

The new leader from the start showed an unwillingness to tolerate the presence of the young males. He would leap at them, with evident intent to do them mischief, whenever they came near him, and this soon put an end to their playing and gambolling. Finally one morning he crept up and caught one of them off guard and biting him savagely through his neck, crushing the bone, he cast

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the quivering form down through the branches below. The other young males were much alarmed, and after this never for an instant ceased their watchfulness.

The usurper soon took to systematically hunting them, watching where they hid away to spend the heat of day, trying to creep up and surprise them. Several times they were nearly caught, and one day he singled out one of them and tried his best to run him down. Up and down the jungle they went, round and round in great circles, the young male making leaps and taking chances in his fear that the older monkey did not dare to venture. Once or twice the young monkey missed his footing and barely managed to catch on a branch as he fell. After a time the older monkey tired and went back to the frightened huddled band of females, and later, to vent his spite, snatched the baby monkey from its mother and hurled it out through the air with great force. It struck the trunk of a tree, stunned, and bounced from one branch to another until clear of the limbs, when it went to its death among the roots and rocks far below. After this the two young males kept well away from the rest of the band, hunting together in constant fear. They were in great danger and seemed to realize

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it instinctively, for with the band there were many eyes to watch for danger and many voices to give the alarm in case of attack.

The females of the old band were also treated with great savageness and were constantly in fear of the old monkey's violent rages, for he would fly into a passion at the slightest pretext, seizing and biting them most wickedly. They, too, got into the way of avoiding him as much as possible, scattering more widely when on the march or seeking food, and this very fear which he inspired was his undoing.

While he was wandering along the lianas one evening just before dark some little distance ahead of the band, he espied a bird's nest, suspended between two twigs among the matted aerial roots of a large orchid. Climbing a liana which swung close beside the nest, the monkey peered about for a meal of fresh eggs.

He was just reaching into the nest when he was caught by the back of the neck and wrapped in the coils of a big tree boa which had some time before eaten the eggs as well as the mother bird, and was lying on the big overhanging branch beside the orchid. Instantly the monkey was crushed to a pulp.

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"HE WAS CAUGHT BY THE BACK OF THE NECK."

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The females, with shrieks of fear, went racing away through the jungle, followed at a distance by the two young males, who, not knowing the cause of their fright, were doubly frightened. After a time their fear lessened, and as the females called to them, they came nearer and nearer; seeing nothing of the leader, they joined the band. But for a day they kept sharp watch lest he return and catch them off guard. Eventually the older one even assayed to lead in the night song, his young undeveloped voice being but a poor substitute for the mighty tones of either of the old leaders.

One night the band had just finished their evening song when there was a challenging bark from a nearby tree. The young males, still thinking of their recent foe, swiftly decamped, but the females, with more curiosity and not quite so much fear, waited. Bounding across the jungle came a big red monkey, which the females of the old band at once recognized as their old leader, who had survived his battle with the usurper.

It seems that when he had fallen he had struck far down on an elastic liana which had broken his fall and had thrown him into a tangle of other vines, where he had managed to lodge with the help of his prehensile tail and long hands and feet. Half

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stunned and weakened by loss of blood, he had lain still till the following night, when he had climbed stiffly up into the top of a wild cashew where the acid fruit cooled his blood and quenched his thirst. He stayed there all that night and at dawn hid away among the branches under the huge arrow-head-leaved arum (tail-flower plant), growing as a parasite high among the branches. There he made his home for several days until his wounds healed and he regained his strength; then he started away through the jungle to seek his stolen family.

At last one night he heard the song, faintly weak and broken, from far away, and hurried toward the spot.

After many hours he overtook the band as it hunted about among the trees. He drew near with more caution until, just as they once more started the song, he came to the tree on which they were sitting. When the song was finished he advanced, expecting to be met by his old enemy, and was much surprised to find none but the females to greet him. They came up hesitantly, for experience had made them somewhat cautious, but he paid them no attention for a time, looking everywhere for the big male; then seeing nothing of him he assumed com-

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mand of the little band, and calling them all together, the night song once more pealed forth in its full solemnity and force. A few days later the young males came cautiously nearer and nearer, and not being pursued they regained their old confidence. In less than a week they were all singing and playing together as gaily as though no more tragedies lurked for them in the jungle.

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The Murderers of

the Brown Water

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The Murderers of the Brown Water

THROUGH the jungle flows the Brown Water. In places this beautiful stream curls itself forward between its rocky banks in angry and tumultuous haste; in others its dark but surprisingly transparent waters loiter luxuriously along still reaches, or revolve slowly in deep, foam-flecked pools. And everywhere the riotous jungle crowds in upon it, the overhanging foliage of tree and liana drinking the spray of its cascades and riffles. Even where its rough banks rise sheer from the water's edge the face of the cliff is draped with green and flowering vines.

At one point the Brown Water slides down a long, smooth plane of rock for nearly thirty feet into a big pool which empties again into a rushing, roaring rapid. This rapid tumbles over and among masses of broken rock and bowlders until it reaches a sharp bend beyond which lies a long stretch of smooth, foam-flecked water. Here the stream broadens somewhat and flows quietly along under the overhanging foliage, lapping at the tips of the

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long and aerial roots of orchids and arums as they sway from the branches high above, while beautiful flowering vines suspend their festoons of blossoms down almost to the surface and birds and monkeys swing among them just over the water.

A short distance below the bend at a point where the stream is about a hundred feet wide, a great forest tree, uprooted by the high water of the last rains, stretches its huge trunk from bank to bank, making a natural bridge of which the jungle children have not been slow to avail themselves. Already, only two months after the rains had ceased, the ferns and parasites had found the fallen trunk and were springing up here and there across the entire length of the still living tree-bridge.

Below this bridge again the stream widened out till it formed a pool two hundred feet wide and a quarter of a mile long. In parts the great pool was shoal, its gravelly white sandbars gleaming like molten gold where the sun struck down through the brown shallows. But in other spots the bottom of this same pool dropped away into black, rocky holes fifty or even seventy-five feet deep. The banks, covered everywhere with verdure, were rough and uneven, the huge buttressed roots of the trees lacing over the ground everywhere to the

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"DOWN TO A SAND-BAR COME A LITTLE FAMILY OF LABBAS."

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water's edge, even covering the great, up-thrust rocks with their gray, lichen-covered masses. But in the pool itself lurked murder incarnate — a horde of restless, alert, silvery, insatiable fish.

There were many visitors to the pool. All the beasts and birds of the surrounding jungle came daily or nightly to drink at the stream, and many of them came to the big pool, for its varied banks afforded good approaches suited to the tastes of all the different creatures. Most of the birds and many of the monkeys, coatimondis, opossums and other tree dwellers, came climbing down the vines and suspended branches to the cool water and sipped the lapping ripples. Occasionally as they drank there would be a loud splash and one of them, bird or little unwary beast, would be snatched from its perch. Then the brown water would fairly boil about the spot for a few moments and as it quieted a darker stain would float away and soon all would be still again, save for the frightened cries as the comrades of the little victim fled in wild haste.

Down to a sand-bar come a little family of labbas or pacas, spotted rodents of about the size of large rabbits. Into the shallow water they splash, squeaking with delight. One of them, a young one testing its swimming powers, ventures too far, and is

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carried into deep water. Unconcernedly it turns to swim back, an easy enough matter for such an accomplished swimmer. But suddenly it screams out in pain and disappears beneath the surface amid a great disturbance of the water. Again the deep blood-stain tinges the water as the ripples float away, and the frightened rodents flee up the bank in terror.

Again, a deer, bleeding in a number of spots from the savage bites of flies, wades in a short distance and lies down to escape the torment. He stretches out till little beside the tip of his nose and his branching antlers are visible, and soaks, enjoying the relief from his ferocious tormentors. Suddenly he springs up, stumbles, falls, springs wildly to his feet again, and makes a bound for the shore; but slipping in his great fright, he falls again, and once more the water swirls and splashes, with here and there a silver gleam. This time the blood-stain is much larger, and after a time, as it drifts away, down through the deep water may be seen a heap of cleanly-picked bones.

The Brown Water runs clear, bearing no stain of its many victims. The great pool seems as innocent as are the small pools above the sliding falls around the bend. But sudden death is lurking in

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its depth. No creature of the land, even up to the tapir or jaguar, is safe should it venture beyond the shallows into the deep water. More especially is it in danger if the skin should be broken or blood-stained, for the murderers will come even into the shallows to follow up a blood taint on the current.

At the time of which I write there was a large sand-bar near the lower end of the big pool, whereon a cayman, as the crocodiles of the Guiana streams are called, had taken up his abode. Here he would lie enjoying the sun till about four in the afternoon, when he would slide slowly off the bar and sail away upstream, gliding along close in under the vines beside the bank. Clear to the head of the pool he would go, then, crossing over through the foam at the foot of the rapid, he would come back downstream along the other bank. Sometimes he would lie close inshore under the overhanging roots waiting for some unwary creature to come to drink, when there would be a rush and snap, and unless the intended victim was very quick indeed the cayman would back away into deep water to enjoy his meal. But seldom was he permitted to eat all of his catch. As he would back away dragging the struggling victim, the murderers would come, flashing like molten silver, and the cayman's prey would

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fairly melt away before his very eyes. In violent anger he would dash among the robbers, snapping with his jaws and thrashing with his powerful tail, killing and devouring them till they withdrew to the depths.

The Murderers of the Brown Water were a great school of the perai, the most savage and blood-thirsty little fishes in all the waters of the earth. Twelve to fourteen inches in length, they looked not unlike the northern bass, although more powerfully built. They were silvery green in color, darker along the back, and bluish on the cheeks. Their thick, muscular jaws were armed with rows of teeth like those of a cross-cut saw, sharp and triangular, and fitting exactly together. These jaws and teeth were most formidable, being able to cut to pieces anything less hard and impenetrable than the hide of a crocodile or the shell of a tortoise. The lower lobe of the tail was longer than the upper one, a form almost unique among fishes; and all the fins were short and gave the impression, as did the thick, rounded body and head, of great strength. They were truly murderers, giving no quarter nor asking any.

The perai for the most part spent the time swimming slowly up and down the great pool, keeping

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"A BIG MATAMATA . . . CAME FROM HIS HIDING PLACE."

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in general to the deeper water. They would, however, occasionally scatter and explore the hidden recesses, nosing along the roots and around the submerged logs and rocks, seeking what they might devour.

As one of them was nosing under a root jutting out from the bank, a curious, triangular, fringed head shot out, on a long neck, likewise fringed, and bit a great piece clean out of the side of the little murderer, himself an adept at biting out living chunks of flesh. Crippled and partially paralyzed, he swam feebly about in a circle for a moment, then sank slowly to the bottom. Again the queer painted head appeared and was quickly followed by a rough serrated shell, as a big matamata — the great snapping turtle of northern South America — came from his hiding place. He swam down, seized the perai by the head, and, pushing at the body with his sharp claws, tore off at least half of it and gulped it down.

He had just seized the dying fish for a third bite when, the blood taint having gone forth through the waters, the rest of the murderers came.

What cared they that it was one of their own number who was killed? They ate the quivering body in a second, cutting it to bits with their sharp

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teeth, paying no heed to the big turtle lying near with indrawn head and feet, watching them with its tiny, close-set eyes. In a few moments they again dispersed and the matamata, robbed of his dinner, retreated to his lair in the bank at the water's edge.

One day in the late afternoon a big jaguar came strolling on silent foot down to the pool for a drink. Coming to one of the big fallen trunks, the top of which was under water, he leaped lightly upon it, and walked down its sloping surface to the water's edge. Here he stopped and took a long drink, lapping up the water as a cat would, then, satisfied, he sat looking intently down into the pool.

Suddenly he crouched closer, ears sharply forward, eyes contracting, and raised one forepaw. Then like a flash he struck deep into the water, sending it flying in every direction and snatching out his big paw with a silvery-green perai impaled on the clutching hooked claws. Seizing the struggling fish in his jaws, he leaped lightly back to a higher part of the log and ate his catch with great gusto. When it was finished he went back to the water's edge, and watched for some time hoping for another chance, but the school had departed.

Later the great spotted cat strolled away down

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"HE SAT LOOKING INTENTLY DOWN INTO THE POOL."

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the bank, stopping occasionally to see if he might get another glimpse of the little murderers which were so much to his liking.

Coming to the sand-bar near the foot of the pool he stepped into the water, and walked slowly out a little way on the bar, past what seemed a sunken log lying at the edge of the deep water. Just as he passed it, the log seemed suddenly to come to life. It shot through the water and, opening a huge pair of tooth-studded jaws, seized the jaguar by the hind leg and tried to haul him backward off the bar into deep water.

The big cat screeched out in fear and anger, and twisted around, biting and tearing at the rough, bony hide of the cayman, for such was the seeming log which had seized him. In spite of his struggles he was dragged slowly under water, but not till his terrible claws had torn a long rip in the hide of the cayman, just behind and under the foreleg where the bony plates are smaller and farther apart. As the struggles of the strangling cat grew fainter and the blood taint spread out through the water, there came the horde of the perai.

The great jaguar was fairly eaten alive, right out of the mouth of the cayman which, slow of mind, did not seem to realize what was happening.

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Then a number of the savage little fishes discovered the rent in the skin of the great reptile, and immediately commenced tearing at the edges, cutting away the softer parts of the skin, and eating into the flesh with great gusto. Dropping his prey the cayman turned to defend himself, thrashing and snapping right and left and killing many of the bloodthirsty little monsters. But the moment he tried to swim away they were back at him, biting and rending at the now greatly enlarged wound. Soon, in spite of his wild struggles, he was torn open and devoured to the last vestige of edible flesh, nothing being discarded but his bones and the bony parts of his thick, rough skin.

It is fortunate that in all the length and breadth of northern South America these rapacious little murderers are only found in widely-scattered localities. Thus one pool will harbor a great school of them, while for miles in either direction up or down the same stream there may not be another individual. Were it not for this peculiar localization the jungles would be nearly stripped of animal life. For beasts and birds and reptiles must drink, and, while some few species can get all the water they need from the dewdrops on the leaves in the morning, by far the greater number must come to

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the streams and pools. Even creatures like that master-fisherman, the otter, must give the perai a wide berth, and no other fish can inhabit the same waters. They have been known to leap a foot out of water and bite a piece out of a man's hand as he was stooping to dip up a drink.

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The Red Brigade

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The Red Brigade

IN spite of the martial splendor of their scarlet coats, it was a peaceful brigade whose regiments manœuvered, year after year, above a little island near the mouth of the Essequibo. For all the thoroughness of their aerial drilling the members of this ibis colony waged no warfare, unless we apply so dignified a title to their constant onslaughts, for purposes of sustenance, upon the tiny crabs, snails and worms of the mud-banks, mangroves, and courida roots. At any time during the nesting season the traveller in this part of British Guiana might have watched these regiments at drill, sometimes sweeping low above the wide brown waters, the massed bright-green foliage of the mangroves making their background, or again doubling and wheeling at a higher level, their beauty flaming vividly against a setting of tropical storm-cloud.

The island which formed the point of departure and of return for the manœuvers was little more than a long mud-bank covered with mangroves and mucca-mucca, with a few courida trees along the

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edge. In the mangroves each year, from time immemorial, the ibises had built their nests, until every available fork and crotch contained its big ungainly bunch of sticks — the nursery and cradle of one of the most picturesque and impressive of all the creatures of the air.

Although all the interests and impulses of their lives pertained to peace, the soldiers of the red brigade had many foes in the surrounding marshes and forests, and even the insular position of their colony did not protect it from invasion. The guise of the enemy might vary from year to year, according to the dramatic whims of the jungle, but always, it seemed, chance brought him to the shores of the ibis island.

One year the enemy made an unpremeditated but effective naval attack, riding down the river on a battle-ship, or rather a transport. This was the trunk of a great tree, the roots of which had been undermined by the rising waters. This potential transport had not long to wait for its crew of one. At a bend in the river the current swung the massive and wide-spreading limbs close to the shore, and one of these, thrust up from the water, rubbed roughly through the low overhanging branches of a tree growing on the bank. In the branches of the

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"THE SOLDIERS OF THE RED BRIGADE."

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tree thus invaded a large boa lay coiled, sluggish from its last meal, and when the big limb pushed and tore its way into his retreat the dazed serpent found himself shaken unceremoniously into the water. He swam lazily over to the floating trunk and, crawling up on it, curled himself up between the bases of two branches and resumed his disturbed slumber. With its new crew aboard, the trunk then swung back into midstream and continued its cruise. Three days later it grounded hard and fast on the mud-bank at the head of the island of the red brigade, and the big snake slid gently into the water and was soon worming his way in among the mangrove roots.

That night there was a soft slipping sound among the branches, a sudden squawk, and the entire brigade rose with a roar of wings, circled wildly about overhead a few times, then once more came to rest; that is, all but one of their number; that one was lying enfolded in the coils of the enemy.

After that, about every second night some nest or perch would be the scene of a similar tragedy, and the flock grew to pay little attention to the choked squawk uttered by the bird which was stricken. As they never saw the enemy, whose mottled coat was almost invisible where it slept

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through the day coiled among the roots, or in the hollow of one of the big couridas, the ibises went on through the long season of incubation, hatching and rearing the young in a fancied security. There were so many of them that the three or four taken each week were hardly missed, save where a bird waited for its mate which did not return, or a nest of young birds starved to death waiting for their mother. Not until the last nestling had matured, and the great flock had scattered all up and down the coast for a hundred miles, did the boa finally conclude that his long season of plenty was at an end, and slipping into the water, swam away to the mainland and disappeared.

The next year, another floating tree trunk grounded in the narrow channel between the island and the mainland. Other trunks drifting down were caught by the projecting roots and branches until a pathway was formed connecting the island with the mainland, as one night a wandering jaguarondi discovered. Leaping from branch to root, and from trunk to branch, he picked his way across to the island. Here his first procedure was to creep up into the branches of a mangrove and spring unceremoniously into an occupied nest. Catching the old ibis whose slumbers he had thus rudely broken,

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"EACH DAY OR NIGHT HE TOOK TOLL OF THE BRIGADE."

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he made a meal. Afterward he broke and ate the eggs and then curled up in the nest and slept.

The jaguarondi was a most wicked-looking little killer. No taller than a big house cat, he was nearly twice as long, with a narrow, weasel-like head, and a rather long neck for a cat. He had a long, slim body and extremely long tail, short legs and small cat feet. His dark grayish-brown coat was faintly lined with whitish tips on some of the hairs, and his deep-brown eyes with the cold green lights in them and his long sharp teeth gave him a most sinister expression.

Having once stumbled upon so happy a hunting-ground, each day or night he took toll of the brigade, eating mostly of the young birds, for the old ones soon grew wary and became very difficult for him to stalk. He was not content with merely satisfying his hunger, but killed as many birds as he could when the lust of slaughter was upon him. Thus it was that in the year of the jaguarondi the inroads upon the flock were much greater than in the year of the big snake, and the numbers of the brigade were not greatly augmented that year. But even his depredations came to an end at last, and in the following manner.

Early one morning at the end of the nesting sea-

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son he was stalking an ibis which was sitting upon a branch of mangrove over the water. The ibis was rather nervous and apparently had suspicions that all was not quite right. The cat came creeping up among the leaves till at last he was as near as he could get without being seen; crouching for a moment, he rushed the remaining ten feet and leaped at the bird, which at his first move had jumped from its perch and went flapping wildly away. The cat tried to clutch the smooth twigs but could not get a firm hold, and went down with a flop into the water, where a small cayman which had been watching him from below, coming with a rush, caught him between its long jaws and carried him, struggling and clawing madly, down under the brown water.

The passing of the jaguarondi meant only a temporary respite for the ibis colony. Each year's nesting season brought its enemy. Sometimes he stayed through the season, at other times but a few days. There were always the caymans, the green alligators of those waters, waiting for a baby ibis to fall out of the nest; and the big green iguana would often make a meal of the eggs, when he could find an unprotected nest. There were snakes of one kind or another which visited the island for

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a short time, and occasionally a hawk or even the big spectacled owl would try a young ibis.

One of the most disastrous years for the red brigade was that in which a family of Indians, equipped with long dugout canoes, bows and poisoned arrows, and the silent and deadly blowpipes, camped on the mainland near by. That season there was a veritable reign of terror among the splendid scarlet birds. First the eggs were taken in large numbers and the old birds were shot as they came to the nests. If by chance a nestful of eggs escaped the attention of these hungry Indians there was always the probability that the oversight would be remedied later; for the half-grown young birds were scarcely more difficult to take, and were equally welcome on the natives' bill of fare. That year the flaming regiments were greatly diminished.

Then followed a few seasons of comparative security. The Indians had paddled away to other camping grounds, and snakes, cats and coatimondies had apparently found richer hunting elsewhere. Thus neglected by its enemies, the brigade waxed strong once more, and again the red regiments drilled over the wide river and above the margin of the sea a mile away, or waded in the warm and

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teeming shallows. Once more the mangroves and couridas were loaded with nests.

By one of these ungainly platforms of sticks and leaves we will pause for a moment, since of the two downy gray nestlings thereon one is to be henceforth the central figure in this true story. Punctuated only by eating and sleeping, the life of these young birds moved forward through a succession of warm green hours. In color the youngsters matched the sticks of the nest, their sober coats of gray down affording a striking contrast to the flaming plumage of their parents. The latter were models of parental devotion, most of their time being spent in foraging for snails, shrimps and little mudfish for their clamorous offspring. (It is to the preponderance of shrimps in their diet, says a native legend, that the ibises owe the gorgeous scarlet of their adult attire.)

While one of the old birds was caring for the youngsters, the other would either sit quietly on a branch near the nest or would join one of the flocks circling and wheeling near. At night the female would cover the nestlings as a hen covers her chicks, and sometimes in the middle of the day when the sun was beating down pitilessly, she would stand over them with black-tipped wings outstretched and

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shade them from its severe rays. Thus tenderly cared for, they grew and developed. In a few weeks the flight quills began to show through the down, and the young birds could struggle to their feet and walk around on the platform. About this time the larger of the two made a tragic exit from the scene. Trying his paces too near the edge, he stepped on a loose stick, lost his footing and fell to the tangled roots below. Too young and awkward to extricate himself, his struggles only carried him deeper until at last he lay on the mud among a tangle of roots so dense that the old birds could not get near him. Here in this wet and steaming prison the little ibis's brief adventure came to an end. In a day or two his young life had flickered out, and the little mangrove crabs were picking his bones.

The other gray baby now came in for the entire attention of both parent birds and flourished accordingly. She was soon able to leave the nest and clamber about among the branches, and when, one day, she deliberately left the nest and, stepping from branch to branch, made her way down to the same root tangle where her brother had come to grief, she was able to walk and even run over the roots, and was in no danger of going down to the crabs below.

There were now hundreds of other gray babies

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down among the roots, for at this age the young ibis leaves the nest and takes up its abode where it is not so conspicuous to the passing hawk or eagle. Here among the roots, the old birds showed the youngster how to find snails and how to catch the tiny hard-shelled little crabs. As the first brown flight feathers grew and became stronger and stronger, the young bird ventured out on the mud flats, and could soon catch the shrimps in the cool muddy water. Very soon after that she had learned to fly. As she progressed in the technique of life her parents' interest in her diminished, and although she would still follow them about, calling and making her usual racket, they came back less frequently to the island and soon ceased coming entirely.

The deserted young bird, together with the hundreds of others, hung about the island for a few weeks, taking longer and longer flights and practising those evolutions which the old birds performed. Finally there came a day when, after they were all completely covered with their first brown uniforms, a small flock of perhaps a hundred birds, of which our gray baby was one, flying east all one day down the seacoast, found themselves at night far from the home island. The next day they continued their eastward flight, and the next, and still the next.

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They had come to a part of the coast near the mouth of another river, where there were many marshy islands behind the sand-bar where the breakers boomed, and here they settled down. There were a few old birds scattered among the islands, and the young birds scattered too, finding good feeding-grounds on the mud-flats and sand-bar at low tide. They now had nothing to do but grow fat and strong in preparation for that molt which should clothe them in scarlet and declare them to all beholders full-fledged members of the flaming regiments.

Our young ibis found this pleasant, lazy life very much to her liking. At low tide she would walk about on the flats, catching shrimps in the pools and crabs and snails among the mangrove roots. Then, when the rising tide drove her off the feeding-grounds, she would sail away out over the water with the others and they would go through their aerial evolutions. Tiring of this, she would fly up into a tree and preen her feathers, or tucking her bill behind her wing, take a nap. Sometimes, for the sake of variety, she would climb around among the branches of the trees, picking up here and there a big roach or little lizard or worm.

Even this delightful round of existence, however,

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was sometimes broken by startling adventures and hairbreadth escapes. Once, at dusk, while hunting worms and lizards in the top of a big tree, our ibis sprang into the air just in time to escape the vicious leap of a coatimondi from a neighboring branch. Several times she had narrow escapes from snakes and raccoons. Then there was also a big cayman which had a habit of rushing suddenly among the flocks when they were feeding on the flats and got too near the edge of deep water where he was lurking. In this way he levied frequent toll on the scarlet regiments.

The long dry season passed and also the short rains; then as the next dry season advanced the red molt came on. First, some of the old gray-brown flight feathers of the wings came out and were quickly replaced by the young scarlet quills, then patches of red began to show on back and breast. Soon the rest of the flight feathers and tail changed to scarlet and the entire bird was clad in the full glowing uniform. This molt she found rather weakening and she was very quiet for a few weeks, but as the new quills ripened she grew strong again and began to feel a strange restlessness.

She would sail away over the water and head out to sea for a long flight, often going out of sight of

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"JUST IN TIME TO ESCAPE THE VICIOUS LEAP OF A COATIMONDI."

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land. At last there came a day when she, in company with a large flock of the other young ibises, who had also gone through the red molt, sailed out together and headed west. Away they went, flying steadily night and day, and in two days made the trip which had taken them twice as long some months before. Coming early in the evening in sight of the old home island, they were joined by other flocks and still others gathering to the call of the mating season. They sailed down to the mangroves and couridas, amid a great outcry, and found perches for the night among the branches. All night long other flocks and regiments came trooping in, and also during the next two or three days and nights, till the red brigade was once more assembled.

Now came a new experience for our ibis. She was a fine large bird in perfect feather, all scarlet except the tips of the five or six longest wing feathers, which were jet black. Her long curved beak and legs were also scarlet, as was the patch of bare skin around the eyes and at the base of the bill. As she was standing quietly watching the clamoring birds about her, another ibis, a fine male who had come in with a small flock from far to the east, sailed down beside her. He began bowing and shaking his wings, and dancing up and down before

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her with spread wings and fluffed shoulders and crest. For a few moments she paid no attention, then something stirred within her and she shyly pecked at him. At this he danced harder than ever, and soon she joined him, dancing as he danced, bowing as he bowed, shaking out her wings and yammering as he did. After a time they sailed down together to hunt for shrimps, a pastime in which the male bird gallantly presented his choicest captures to his new-found mate, who accepted these attentions with a certain appearance of coyness.

In a day or two they began hunting for a location for a nest, and as there were several thousand other pairs of birds seeking the same thing, they found it no easy matter. At last, however, they settled upon an unclaimed fork in a mangrove overhanging the water. There the male bird took up his station to keep off intruders, and the female went hunting for twigs and small branches for the foundation of the nest. There were so many other birds also hunting branches, and this had been done for so many years, that there was almost a famine in building material, but finally our ibis found a dead tree back in the jungle about half a mile from the river. She made many trips back and forth carrying twigs and sticks till there was a fine large plat-

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"FOR a few moments she paid no attention"

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form, and when this was lined with mangrove leaves the nest was ready for use. There were now thousands of other nests all around this new home, the whole island being literally covered by a canopy of them. Every fork and crotch bore its platform of twigs with its carpet of leaves.

Soon there began to appear pretty blotched and speckled green and brown eggs among the leaves, and one day our ibis, having the day before laid her third egg, began to sit. Day after day she sat on the nest, not leaving it for more than a few minutes at a time, and only once or twice each day. Her mate joined the other males and went circling about performing beautiful evolutions.

Now began the long rains. Each day it would rain for a few minutes, a sharp drenching downpour, then the clouds would break and the scorching rays of the tropical sun would start the jungle steaming. The ibises paid little heed to the rain. There was, however, a danger which threatened them, not from snake, or jaguarondi, or even the cayman this time, but something more deadly than these.

Some months before, far across the ocean, in France, those august personages who foregather to decide what my lady shall wear the following season had sent forth the news. It was to be a " feather

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year." This meant that all hats, large and small, must be trimmed with feathers.

A cablegram came to that most unwholesome city, Cayenne, which is the capital of French Guiana, and, a few days later, a small schooner sailed from the harbor, turned west, and crept along up the coast. The crew consisted of a captain and four seamen, all negroes. There was also a white man, who appeared to be a passenger. They carried nets and other fishing tackle and occasionally stopped to fish. Then after a little they would continue their slow course up the coast.

The passenger spent a great part of the time viewing the distant shore with a powerful field-glass, and when he would lay it down to eat or rest one of the crew would take it up and continue the scrutiny of the coast-line. For days they sailed along the water-front of French Guiana, then slowly past Surinam, and finally past the mouth of the Corentyn River. Watching sharply for English vessels, they stole along the Demerara coast, made a wide détour to go well out of sight of Georgetown, and when well past, headed back once more toward the shore.

The day after they had again sighted the coast, and were progressing slowly as usual, the passenger, who was studying the shore-line with his glass,

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suddenly started to his feet. He had made out a small red cloud floating along far away near the coast.

He turned about with sharp commands to the captain, and at once everyone on the boat was hustling. The schooner was headed inshore, and when judged to be at about the three-mile limit was thrown up into the wind. Soundings were taken, and, finding the water shallow, the crew dropped the anchor. For a few hours the passenger watched the red cloud, which sailed back and forth, for a time but finally veered off to the westward and disappeared. The anchor was drawn up and the schooner headed again toward the west.

Some time later, just at sunset, the passenger gave a satisfied exclamation and the anchor was dropped once more. At daybreak next morning the sight of a distant steamer sent the schooner scurrying north a few miles in a most guilty fashion, beating back and forth, drawing nets and making a great show of fishing. Some hours later, when the steamer had disappeared, the nets were drawn in and the mysterious schooner headed once more for the shore. Taking constant soundings, she advanced cautiously as far as she dared, then a small but well-loaded dory was lowered over

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the side, and the passenger and one of the negroes got in and rowed away toward the north of the Essequibo. The schooner swung around and an hour later the crew were once more innocently engaged in fishing far offshore. The dory disappeared through a break in the coast and was not seen again for several weeks by the crew of the schooner.

The next morning some of the ibises, circling over the river half a mile up-stream from their island, saw a tiny camp at the foot of a great tree on the bank. Some instinct, perhaps a faint remembrance of the year of the Indians, awakened within them. They swung away with hoarse squawks of alarm. That afternoon, when the midday heat had somewhat abated, the dory containing only the white passenger came floating down the stream with the tide and slid gently under the overhanging mangroves. As it came near all the ibises on that side of the island rose in a cloud with a great roar of rushing wings, and with a loud clamor of many throats they circled about high overhead.

The eggs were all hatched now and the young birds, a week or two out of the shell, must be fed and shaded from the sun. As there was no

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movement in the dory under the mangroves, the old birds began to come back, singly at first, then in pairs, then by the dozens and hundreds. In the racket which they made, they paid little heed to a sharp pop which came every few minutes from the quiet figure in the dory. Only those nearest saw that after every tiny report one of the ibises dropped.

At last after forty or fifty birds had fallen into the water or down among the roots, the man laid down his little rifle, arose and looked around. He was just in time to see a small cayman rise to the surface beside one of the dead birds and, opening its mouth, seize it and sink out of sight again. With an imprecation he seized his oars and gathered in the floating birds. He then climbed ashore and collected those which had fallen among the roots, piled them in the dory, and rowed away to his camp.

Early the next morning he returned and took up his stand deep in the heart of the island. About eleven o'clock, the sun getting too hot, he ceased shooting and gathered together over a hundred birds. That evening, after the afternoon shooting, he had as many more.

Every day, morning and afternoon, this merci-

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less wiping-out of the brigade proceeded. In the nests the young birds were calling for their parents, at first softly, inquiringly, then as their hunger increased, more and more insistently; after a time these cries grew fainter and fainter, and finally ceased altogether.

Each day brought its new hundreds of starving gray babies, while back at the little camp the negro stripped off wings, backs and breasts — breasts, backs and wings, by the hundreds, and each day the packs of the beautiful flaming feathers grew larger and larger.

One day the dory came to the shore directly under the nest of our ibis and her mate. After the usual frightened clamorous flight of the whole flock, individuals began to venture back to their nests. Our ibis was one of the last to return, and just as she was about to alight, there came that familiar "pop," and a splendid bird, which had built but a few feet away in another fork, dropped fluttering from a branch beside its nest. With a frightened squawk our bird sprang once more into the air and circled wide overhead, but soon the demands of the babies were again too much for her fears.

This time she alighted on a branch near the nest

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"WITH A FRIGHTENED SQUAWK OUR BIRD SPRANG ONCE MORE INTO THE AIR."

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and straightened up to look around. Again the sharp bark of the little rifle sounded, and she crumpled up and fell without a flutter down through the branches. That night her feathers were added to the pack in camp and a day or two later her mate met the same fate.

At last came a day when the hunter came back to camp with but thirty or forty birds. The negro looked up questioningly.

"Shot out," said the hunter, laconically. The next day, in answer to a signal, the schooner came in from the fishing and the dory was picked up.

"What luck?" asked the captain.

"Pretty good; about thirty-five hundred," said the hunter.

The schooner sailed back to Cayenne and the feathers were shipped by the next steamer to a famous Parisian milliner.

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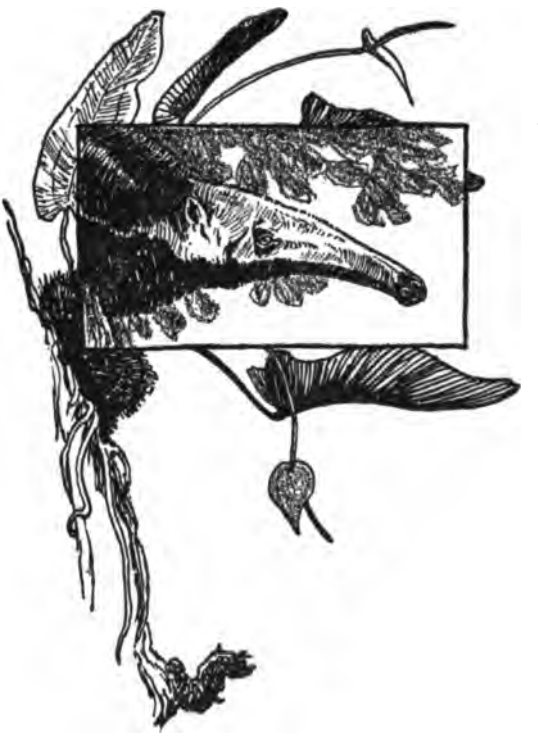
Meat of the Toothless



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Meat of the Toothless

A COOL wind came down from the mountains to the west and swept across the broad savannah, causing the tall grasses to bow and bend in waves like a field of grain. It tempered the last rays of the setting sun, which, under the equator, even at evening gives forth a heat that is almost unbearable. It swept in among the trees growing in a strip of jungle perhaps a quarter to a half mile wide, following the course of a small river winding its devious way through the savannah.

The trees near the bank of the river were very large and tall; for the most part, they decreased in size farther from the water, for there is some quality lacking in the clayey soil of these savannahs which will not support trees at any distance from the streams.

At one point the river threw out a sharp elbow which reached nearly to the edge of the savannah, and there, growing from the steep, rocky bank

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stood a great gnarled mora, which towered above the other near-by trees, a splendid, buttressed, jungle monarch.

Though weather-beaten and scarred by the storms of years it was still strong and sturdy, and the parasites, always seeking a chance to attack, singularly had only recently begun to affect it seriously, for its exposed position, far from other jungles, with the prevailing winds sweeping across the wide savannahs from the west, kept it free of fungi, the spores of which float everywhere through the forests and find every abrasion or weakened spot, soon conquering even the mightiest of the forest monarchs.

At last, however, the fungi had attained a foothold, and a toucan, wiping its great green and yellow beak after a meal of wild figs, had deposited a seed on a wind-broken branch. The seed had germinated, and the strong, snakelike roots of the fig had crept down the big trunk and would eventually, if undisturbed, strangle the old tree. The tide of its life had begun to ebb, and now there came the all-pervading, all-conquering armies of the ants.

In the great jungles of Equatorial America the ants are everywhere. In infinite variety and un-

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"A TOUCAN, WIPING ITS GREAT GREEN AND YELLOW BEAK."

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countable myriads they invade every nook and cranny, investigate each branch, twig, leaf and flower of every tree, bush, vine and blade of grass. Should a twig be snapped off the top of a forest monarch two hundred feet above ground, the broken stub will be tipped with a tiny thatchlike nest of the termites, those so-called white ants which live on decomposing vegetable matter, — or if the wind has snapped off the entire top of the tree, leaving a great stump five feet or more in diameter, that stump would likewise be crowned with a thatched-dome nest, proportionately large, of those same termites; or, should some boring rodent gnaw away a root somewhere far underground, there too at the broken end of the root would be a subterranean nest.

On some trees, apparently perfectly sound, these curious termites, having an underground nest among the roots, will build covered passages up the trunk, and out each branch and twig to the very tip, there will be thousands of feet of tiny passages not more than an eighth of an inch wide, formed of minute bits of decayed wood, glued together so tightly that it takes quite a sharp scratch to break down the structure; — altogether a most wonderful piece of construction for one colony of

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the little insects, each one not over one fourth of an inch in length. Should a section of the tunnel be destroyed, within a few seconds there will appear numbers of the semi-transparent little creatures, a few of them larger than the others, apparently soldiers on guard to protect the smaller workers, which latter immediately set to work to repair the break. Their tiny heads pop out with still tinier bits of decayed wood between their jaws, the bits of wood are quickly set in place, glued with the sticky saliva exuded from the mouth, which dries almost immediately, and the ant is away for another piece of building material, giving place to another worker with his burden.

Within a few minutes the break is entirely repaired. The ants working at both ends of the opening, bring them rapidly together, and finally join them perfectly.

There is a small black ant which builds a mound about the base of a dead tree and tunnels the decaying wood through and through till the honeycombed shell crumbles and falls.

Another variety builds a great, black, roughly-conical structure from four to ten feet in height among the grasses of the savannah. Many other kinds have wonderful systems of underground tun-

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nels extending, in some cases, for dozens of yards, zigzagging back and forth, twisting around, over and under roots and stones with a number of entrances scattered about a large space of the jungle floor.

Other varieties find sanctuary among the matted aerial roots of certain varieties of orchids, whence they sally forth to repel anything which might be attracted by the gorgeous blossoms of the plant, and right well are they able to defend their host, for they are very vicious, their jaws being slightly poisonous and their bite burning like fire. Absolutely fearless, they are ever on the alert for anything that may come. Roaches, spiders and other soft-bodied insects are quickly killed and eaten, and larger creatures are for the most part forced to flee.

All the termites and some species of true ants live entirely upon decaying vegetation, while other forms, like the great black dinoponeras, an inch and a quarter long, and proportionately thick, and the saubas, or leaf-carrying ants, gain subsistence from fresh-growing leaves, bark, fruit, etc. The saubas are especially interesting, for they may be seen following a certain path from the entrance of their great subterranean galleries to some tree or bush, the

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leaves of which are at the right stage of development. In double file, one solid line of ants on its way with empty jaws to the tree, the other in equally close formation returning, each ant laden with a circular bit of leaf perhaps one half inch in diameter, carried edgewise over its head, looking like a tiny boat under full sail.

Then there are the carnivorous or army ants which at times sally out from their underground caverns and go marching through the jungle in solid phalanx, overrunning every tree, bush or plant, investigating every tiny hole, under and over every leaf or twig, log or root, rock or pebble. And woe to any living thing which is not able to fly or run or leap out of the path of the all-conquering army. Any slow-moving creature is instantly covered with a biting, stinging, swarming mass; and sometimes large creatures, — even the great boa-constrictor, in a state of torpor from a recent meal — are fairly eaten alive, nothing remaining but the clean-stripped skeleton, its contorted position and the broken twigs and branches showing how it had slowly, too slowly, awakened; its belated mighty writhing and thrashing all of no avail. There are unnumbered other varieties of ants, tiny red ones, so small as to be almost in-

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"SOMETIMES LARGE CREATURES, — EVEN THE GREAT BOA - CONSTRICTOR . . . — ARE FAIRLY EATEN ALIVE."

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visible to the naked eye, tiny black ones no larger, and all sizes of both colors up to those enormous dinoponeras already mentioned, which, if it were not for their enemies, would absolutely overwhelm the entire jungle, and all its inhabitants. But their enemies are many.

Regularly after a certain time in every ants' nest the last great mass of eggs laid by the queen or mother ant are incubated and all hatched at once. These young ants when fully developed are all perfect males and females, and are winged, and they issue from the entrance in a great swarm and fly away in every direction hunting for mates from some other swarm of the same kind.

They are in such multitudes that for hours the air near the entrance to the nest will be fairly alive with them. Then every bird and lizard in the vicinity becomes temporarily an ant-eater, and many other kinds of insects, — wasps, hornets, spiders, some kinds of flies, and certain beetles — join in the slaughter, for these young ants are soft-bodied, stingless, and so at the mercy of any creature which may discover them. Of all this great swarm only a few find mates, and of these few, many in their mating flight are snapped up on the wing by the birds. All the males and un-

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mated females after casting off their wings soon die, and of the mated females, but few indeed escape the birds in the air and the myriad lizards and insects on the ground.

Each one of these survivors, however, digs a hole and lays a few eggs, which are quickly hatched, and develop into workers, these workers quickly enlarge the hole, and soon a new colony is well under way. These wingless, hard-shelled workers are the ants which are crawling everywhere, all-pervading, all-threatening.

Fortunately these omnipresent pests, even the biting, stinging, hard-shelled ones have many enemies. There are certain families of birds, the ant-thrushes, tree-creepers, etc., and some of the lizards, which live entirely upon ants, as do those three curious animals, the tamanoir or ant-bear, the tamandua, and the cyclothurus or little anteater.

To the great tree at the edge of the savannah had come the ants, the covered passages of the termites extending from the ground to the tips of the branches. On the ends of the storm-broken branches in the top were the black, thatchlike nests of a variety of the termites. Among the roots of huge orchids growing in forks near the top of the tree were established colonies of the small, black,

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stinging ants. About halfway from the ground to the lower branches, several bushropes, or lianas, hung together against the trunk, and a falling branch having lodged there, a small mass of dead leaves and twigs were caught, and held as though in a rude basket. In this mass was lodged a vigorous colony of large coppery-brown ants.

But the ground around the roots was the great haven. Here, four or five different varieties had established themselves, a small nest partly above ground, against the very trunk of the giant black dinoponeras, a little farther away a monster tunnel system of the saubas, a little farther yet out in the edge of the savannah grass a huge dome, — eight feet high, — of the hill builders, and scattered about were several nests of various other less conspicuous varieties.

One might imagine that the trunk and branches of the great tree would be constantly covered with the busy insects, but such was not the case, for termites work always under cover, while the others, the orchid dwellers, seldom came from their nests, being satisfied to catch the roaches, spiders and other insects attracted by the bright flowers and fleshy green leaves of the plants. Of course there were always many ants to be seen running

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up and down the branches, trunk and hanging vines, but in proportion to the number of colonies they were comparatively few.

The wind from the savannahs broken by the tree branches and filtered to a mere breeze, floated gently among the trunks and vines, and in the ever-present gloom of the jungle the creatures of night began to stir. When, with barely more than a momentary blaze of red in the west, the sun dipped below the horizon, those creatures of the dark made haste to emerge from their retreats.

The lantern flies floated forth and on silent wing moved up and down in what seemed almost a rythmic dance, and, their wonderful lights flashing forth at regular intervals, each almost as bright as the flame of a candle, gave to the dark, silent jungle a weird and mysterious effect.

They were everywhere in little companies of ten or a dozen; up above the tree-tops, among the leaves and branches of the roof of the jungle, among the great trunks and vines, down near the ground, and, as it grew later and darker, out over the savannah just above the tall grasses they performed their strange, beautiful dance.

In the top of a tree growing near the giant mora, soon after the lantern flies started their

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wierd evolutions, there emerged from a dense clump of leaves a strange little creature, grayish yellow in color with fine, close, silky fur, somewhat like that of a chinchilla in texture. The little animal was most curious in form and action; about as large as a red squirrel, it was rather more slender and its nose was longer, though more blunt, than that of the squirrel, and curved down toward the end. Its mouth, at the end of the snout, was very small, and incapable of being opened more than a quarter of an inch. Perhaps most curious of all, the utterly toothless mouth. The legs were rather thick and strong, and its front feet had but two toes each, very short, armed with long, stout, sharp claws of unequal length, which curved inward. Its hind feet were flat and like those of a bear in form, with four toes armed with rather short, sharp claws. Its tail, very thick at the base and tapering toward the end, was covered with fur like the rest of the creature. It was as long as the head and body together, and very strong and prehensile, like those of some monkeys. Its mode of progress was very peculiar, owing to the incurving toes and lack of palms on the front feet.

It could climb up or down among the twigs and small branches with much facility and fair speed,

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but on large horizontal branches its progress was awkward, and though not hanging underneath the branch, somewhat like that of a sloth.

It came climbing up through the outermost twigs of the smaller tree, clambered across to a swinging liana and moved slowly along to where the twig-tips of a low, swinging branch of the great tree swung close to the big vine. Here it stopped, gripped the liana with its powerful tail, braced its hind feet against it and thrust its body straight out horizontally, at right angles to the vine, — a position never assumed by more than one, or possibly two other animals on earth, waited for a few moments till the twigs swung within reach, — a matter of nine inches. He grasped them with strong front claws, swung off from the vine and quickly climbed up among the twigs to where a clump of four or five small branches started out together from a larger branch. Here he stopped, sat up like a little bear, and began combing his pretty fur with his front claws as a bird preens its feathers after a long flight.

The strange little animal was the cyclothurus, the little wooly anteater of the tree-tops, which is born, lives and dies on the roof of the jungle, passing its entire existence far above the ground,

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living on the tree-dwelling ants and any others which may ascend to its altitudes.

It is entirely nocturnal, spending the days in a hollow limb or curled up in the midst of a mass of leaves, and keeping for the most part to the outermost twigs and branches, too small to bear the weight of its enemies, for it is a harmless, inoffensive, and apparently defenseless little creature. It can, however, strike a smart blow with its sharp claws, so that the small monkeys, birds and other creatures which might run across it have learned not to molest it.

After the anteater had preened its fur to its satisfaction, it climbed up among the twigs and branches till it came to a small branch projecting above the crown of foliage. This branch had been snapped off by a high wind some months before, and the deadened tip had been found and capped by a colony of termites with a small black nest. The anteater climbed up the branch, mounted the nest, and sat up on the top with hind feet planted well apart, and long prehensile tail wrapped around the nest, its tip taking a turn about the branch below. The little creature tore a hole in the thatch with its stout claws, and thrust its nose into the opening; in all the passages which were exposed,

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its long, slender, pink tongue, covered with some adhesive matter, playing in and out like an active worm, darting into a passage and out to the mouth laden with termites, then back again. When the supply of insects began to lessen, the little creature would claw and tear away at the structure, enlarging the hole till finally there was left but the empty shell of the nest.

As the anteater sat up and looked around out over the jungle, and away over the broad savannah, its tiny eyes blinking in the bright moonlight, there came out of the night a spectral form floating on silent wing. The little creature instantly flung itself backward, falling flat, head down against the branch, held from falling only by the grip of its tail tip, curled tightly around the branch. As its body struck, it flung its limbs around the branch, clasping it close, and clung motionless, stretched out flat, so that it was hardly distinguishable.

The night heron sailed softly down and alighted on the shell of the nest just over the anteater, sat there on guard a few moments, then, without noticing the little animal, sailed away down among the leaves and branches to the bank of the river.

The anteater lay motionless for a few minutes, then cautiously slipped down the branch and into

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"THE NIGHT HERON SAILED SOFTLY DOWN."

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a clump of foliage, where it remained hidden for some time. A little later it emerged and climbed down to a fork where grew one of the big orchids. As it came near the great mass of roots and leaves, some of the savage ants living within were running about over the twigs and branches on guard to protect their citadel from any invasion. They at once charged the little creature, which met them with viscid tongue and open mouth, busily lapping them up as fast as they could come.

On the other side of the great tree and growing somewhat lower than the limb on which was perched the orchid, another and much larger limb thrust its gnarled, twisted form out from the trunk, and crouched motionless thereon was an interested watcher of the slow progress of the ant-eater down the branch. It was a galictis or tayra, a big, black, active weasel, with gray head and white throat, resembling a greatly overgrown mink, and a little larger than the largest house cat. It had been hunting for sleeping birds among the lianas, and, having had no success, had been sitting quietly for a few moments, when its keen eye had caught the movement of the leaves as the ant-eater had started downward. It had watched the slow approach with much interest, and was greatly

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disgusted when the cyclothurus had stopped near the orchid.

Taking advantage of every bit of shelter, the big black weasel crept down the branch to the trunk, climbed cautiously up the side opposite the anteater till it came to a branch growing out from the trunk at an angle from the one on which grew the great orchid. Very slowly the tayra pulled itself up on this limb, and crouching flat, crept noiselessly across to the branch where the anteater sat lapping up the ants which came his way. This branch was about two inches thick down to the fork about five feet away where the orchid was growing. At that point it met another branch, and beyond this fork was about four inches in diameter. Ten feet further along, it joined still another and larger limb, and from that fork to the trunk had a gnarled, irregular diameter of perhaps seven or eight inches.

Along this thick part of the limb the tayra crept very softly and slowly, for it was in full view, but when it came to the first fork it was hidden for the rest of the distance by the great mass of the orchid roots and leaves. Here, however, the more slender branch made its footing less secure, and it was forced to go slowly; however,

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by careful balancing it soon came to the orchid, and was about to push its way among the leaves when it felt a sharp pain in its forepaw, which made the big weasel lift and shake it violently, nearly losing its balance thereby. It did not quite fall, and, snarling silently, it reached out its paw to step on the orchid. Just then it felt the same pain in its other forepaw, and then in both hind ones, and was aware of a crawling sensation on its legs. With a spring it landed snarling, — not so silently — in the midst of the orchid, and looked to see if the anteater was yet there, still too interested in its hunting to realize what was the cause of its discomfort; it quickly spotted the anteater, but saw that the branch was very small, too small to run or even to jump on, and now, all at once, it was being bitten and stung everywhere.

The big weasel shook its head and paws, but for each ant thus displaced, a dozen more swarmed to the attack, for the disturbance had brought out the entire garrison, and they had rushed to repel the invader. The startled tayra could stand it but a second, and turning, scrambled, snarling and growling, back the way it had come. Once it lost its balance, and barely escaped falling to what

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would have been almost sure death among the roots far below. Its strong claws, however, saved it and, smarting and burning, it clambered down the branch to the trunk, down the trunk to another branch, along that to where it could spring to another, and so out of reach of the enraged insects.

When the anteater saw the big weasel land so near it on the orchid it turned and hastened as fast as it could out on the branch, taking refuge among the twigs and leaves, where its instincts told it that the tayra could not follow it.

Far down, perhaps seventy-five feet below, where the mora's great trunk stood like a giant column among the trunks of the lesser trees, the massive bole draped and festooned with vines, lianas, and long, pendulous aerial roots of orchids growing on the branches far above, along the swinging trunk of a big liana which stretches away among the columns there came a curious creature. About the size of a large cat with a tail somewhat longer than its body, with its long-nosed slender head, small low-set eyes and ears and curious feet, it looked like a short-haired, enlarged caricature of the little woolly anteater, and that surmise would not be far wrong, for it was the tamandua, the anteater of the tree-trunks. Its head was pro-

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"THE TAMANDUA WAS PERFECTLY ADAPTED TO A LIFE AMONG THE LIANAS."

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portionately much longer than that of the little anteater, and the claws on its front feet, of which there were three, were much larger and stronger, particularly the middle one. Its tail, thick and strong, was nearly naked at the end, and, though somewhat prehensile, was not as limber as the smaller species. Its color, too, was quite different. Head, neck, legs, and line down the back and part of the tail were yellowish gray. A band over the shoulders, and the rest of the body were rich chocolate. The naked tip of the tail, and feet pads were blackish brown.

Very similar in its habits to the little anteater, the tamandua was perfectly adapted to a life among the lianas as was the other to its abode on the jungle roof. Neither one ever had of necessity to descend to earth, and although the tamandua at times made quite extensive journeys among the roots and rocks and even for short distances out into the savannah, it was very clumsy and evidently out of its element on the ground, but when it was swinging along among the lianas its powerful claws and long, strong tail came into good use, and the ease and freedom of its movements at once disclosed its true home.

It swung steadily along the great vine till it

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came to the big trunk, when it climbed slowly up through the tangle of vines and roots, its long viscid tongue searching out every insect crawling within its reach, till it came to a mass of dead twigs and leaves caught in the tangle. Settling itself comfortably, it proceeded to pull the mass to pieces. It quickly uncovered the ants' nest which its keen nose had at once discovered, and its active, sticky tongue very rapidly lapped up the entire colony. Many of the ants swarmed on and over it, biting and stinging, but it was oblivious, its tough, leathery hide being quite impervious to the little jaws of the enraged insects.

The tamandua soon finished the destruction of the mass of leaves, and, having devoured most of the ants as well as a few reaches, spiders, etc., which had also found refuge among the leaves, turned its attention to the covered passages of the termites. With a sweep of its powerfully armed front paw it would brush away a section, and then, thrusting its muzzle into the break, its tongue would dart first up, then down the passage. This activity would last for some time, as there were fresh myriads of the termites constantly coming to replace those already eaten. When the numbers finally grew noticeably less, the curious crea-

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ture would climb part way around the trunk to another covered passage, brush away a small section and repeat the taking of toll.

As it sat on a liana, its tongue darting in and out, up the vine came climbing another strange animal, about the same size and general proportions as the anteater, — its long tail equally prehensile, but in other ways quite different. Its head was short and round with broad, blunt nose, and instead of the toothless jaws of the anteater, its mouth, even when closed, showed two great brown, square-ended teeth, which gave evidence that it belonged to the rodents. The gleaming, short, sharp quills, occasionally visible through its rather long, dark gray hair, proved it to be the tree porcupine.

Up the long vine it came till it reached the tamandua, and there it stopped, alternately raising and lowering its quills and watching with impatient eyes the careless, unheeding tamandua, which kept steadily at its meal, taking no notice of the irritable new arrival. The porcupine gnashed its big teeth menacingly a few times, then, seeming to think better of it, turned aside and went climbing away along another liana.

Soon after, the tamandua, searching for fresh ant tunnels, left the liana and, with widespread

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arms and legs, its sharp, powerful incurved claws taking advantage of every tiny inequality in the smooth bark, it swarmed with flattened body slowly up the monster trunk. Higher and higher it went till it came under a great branch growing out almost at right angles to the giant column. There it found a fresh tunnel of the termites and went to eating once more.

As it started slowly up the smooth trunk its movements caught the eye of the tayra far above, where it was just ridding its fur of the last of the biting, stinging defenders. Its appetite still unappeased and its temper always short, stung almost to madness by the stings of the ants, it came on the run. Leaping from branch to vine, and from vine to branch it rapidly descended till it reached the big limb just under which the tamandua was feasting. Crouching there it peered down at the clinging anteater.

It craned its long neck over till it was almost unbalanced, reaching down first one paw, then the other, then, keeping a grip with its hind feet, reached down with both forepaws and open jaws, but the anteater was just beyond its reach. Straightening up, it looked around and then ran out a little distance, jumped to a big liana, and ran down to

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"REACHING DOWN FIRST ONE PAW, THEN THE OTHER."

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the vine the tamandua had just left. Coming quickly under the anteater the tayra stood up on its hind feet, its front feet against the trunk, and reached and stretched up as far as possible, but all in vain. Then it felt all about for a grip so that it might follow up the smooth trunk, but its claws, not retractile, like those of the cats, were blunted by the rough ground over which it was constantly running, and the hard, smooth bark would give it no foothold. After repeated fruitless effort, it again climbed back on the big branch, but the anteater, realizing the safety of its position, never moved, and, after climbing back and forth a dozen times, at last the big weasel gave up in disgust, and went rambling away among the trunks and vines.

At the very edge of the jungle, where the last bushes met the grasses of the savannah there was a great heap of hard, black earth, a mammoth ant-hill, perhaps nine feet high, about the top of which the lantern flies were assembled in some numbers. Early in the evening there appeared, parting the high grasses, a very long, attenuated nose, followed by a small head, an equally long neck and a short body, covered by long hair on thick, bearlike legs, followed by a tail so covered with long hair that

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it was like a great plume. The creature was quite large and looked somewhat like a greatly exaggerated copy of the tamandua. Its head, mostly nose, was drawn out to a length of fifteen inches, with a tip of less than an inch in diameter, which was divided by a little toothless mouth like that of the other anteaters. It had the same curious plantigrade hindfeet, and its forefeet were armed with huge claws, the longest nearly four inches round the curve, and very sharp.

The creature walked easily along but with a most curious method of stepping on the outside of its forefeet so that there was a decided palm or callous on the side of the foot. The claws were turned inward so that no wearing sticks or rocks might blunt their needle points. The big beast, as large as a big St. Bernard dog, was a fine specimen of the tamanoir or ant-bear, the anteater of the lower jungle.

These three creatures, most curiously specialized for their work of keeping down the overwhelming myriads of the ant colonies, are wonderfully fitted for their parts in the drama of the three parts of the jungle. The cyclothurus, anteater of the upper jungle, least active, smallest, absolutely arboreal, almost helpless on the ground, is so small that its

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weight is carried by the tips of the branches, and its front feet, two-toed, are like those of that other arboreal creature, the sloth, of use only for climbing, there being no palm whatever. It escapes its enemies by being nocturnal, and keeping for the most part to those slender twigs which will not bear their weight.

The tamandua, larger, more active, fitted for the hunting of its prey through the middle jungle — those vines and lianas which swing among the trunks and branches, between the leafy roof and the root-matted floor — is less arboreal, with three toes on its front feet and a slight callous or palm on the outside. It has a prehensile tail, like that of the cyclothurus; its nose is somewhat longer and more slender in proportion. Last is the tamanoir, anteater of the lower jungle, largest of all, living entirely on the ground, its tail not at all prehensile, but, instead, covered with a great mat of coarse hair. Its forefeet having four claws with well-developed palms on the outer side of the foot, it walks fearlessly through the jungle or savannah, relying absolutely for safety on its long, sharp claws and the strength of its powerful forearms, with the bearlike grip of which it can crush most of its possible enemies.

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The ant-bear came walking slowly out into the little clear space around the great ant-hill, and at once began sniffing around the big mound, seeking a spot where its sensitive nose and ears would tell that the shell was less thick and impenetrable. It soon found the right place, and, sitting up like a bear, it began to rake and tear with its powerful front claws. At the first scratch there was a flop and something went scurrying away into the tall grass. It was a big, brown iguana, which had used the ant-hill as a watch-tower from which it might snap up passing insects or sally down for a meal of tender, young leaves or shoots. At the sound, the ant-bear stopped and looked inquiringly around, then, as the sounds of the nervous reptile died away among the grasses, it again turned to its digging. It soon effected a breach in the fortress, and, as the ants flocked to the defence, it proceeded to take its fill, licking them up very rapidly with its long, snaky, sticky tongue. As the numbers of the ants were reduced the tamanoir would rip out another big section and was soon almost hidden in the gaping hole.

As the great anteater sat eating there were many visitors to the ant-hill.

A large, mottled, brown bird, very similar to the

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"SEEKING A SPOT WHERE . . . THE SHELL WAS LESS THICK AND IMPENETRABLE."

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whippoorwill of the north, but much larger, one of the nightjars, came and perched, uttering its loud, monotonous cry a dozen or twenty times in rapid succession, then flew circling out over the savannah, its gaping mouth opened wide, snapping up mosquitoes, moths and other night-flying insects. After wheeling and swooping about for a few minutes, it came back to the ant-hill, again sounded its strange cry many times and then was away again after more insects.

It repeated this performance a great many times.

The great iguana came cautiously creeping back, but a slight movement of the busy ant-bear again sent it scurrying away.

A big, spectacled owl came floating on silent wing during one of the brief absences of the nightjar, and was about to alight on the big mound when the ant-bear tore away another section, and the owl went silently sailing away to the shelter of the trees. A timid young brocket, or jungle deer, came with mincing tread into the little opening and was startled in the same way; leaping nervously to one side, it stopped, stretching out its nose, and with eyes and ears on the alert, it cautiously approached. When it had come quite near

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it sniffed the air curiously, then, seeming to lose interest, went on its way.

Everywhere in the jungle is tragedy and death. The hunting of the nightjar brought many little creatures of the air to a sudden end. A little later the big owl found a tiny opossum and made a good supper thereon, though the rank, fetid odor would have seriously offended more sensitive nostrils. At about the same time the brocket walked under a great liana back in the jungle, and death in the form of a lurking puma dropped upon it.

A little later the tayra, which, having had no success in its aboreal hunting, came running noiselessly through the tall grass just as the iguana was once more venturing cautiously toward the ant-hill. The movement caught the eye of the weasel, and it stopped short, unnoticed by the lizard. The big reptile crawled slowly, laboriously forward, pausing occasionally to listen, and the tayra crept softly nearer and nearer, stopping when the iguana stopped and running softly forward each time the iguana moved, as a cat creeps up on an unsuspecting sparrow.

When it had come within about ten feet of the lizard, the tayra made a final rush and the iguana, though taken by surprise, leaped forward and side-

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"IT SEIZED THE BIG LIZARD BY ITS LONG TAIL."

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ways and nearly escaped, but the tayra was too quick. It seized the big lizard by its long tail, and though the reptile flapped and struggled and finally jerked one of the segments of the tail right apart, hoping to escape with only the loss of the tail which could be regrown, the tayra was still too quick for it, and, shifting its hold in the nick of time, seized the iguana afresh by the back. In the struggle the now tailless lizard, twisting and turning, and snapping with its long, well-armed jaws, caught the foot of the tayra and nearly severed one or two long-clawed toes, — but just then the sharp teeth of the weasel came together through the backbone of the lizard and suddenly its jaws snapped open, its legs stiffened, and toes spread wide apart, and, with a shudder, it relaxed. The tayra quickly tore it open, and, picking out especial bits, the liver, lungs, brain, etc., left the mangled carcass lying in the grass. Almost before the big weasel had left it the carnivorous ants were covering it, and by night of the next day there was little more than a few bones left.

The tayra trotted away through the grass and soon came to the little opening around the ant-hill. Almost instantly it saw the anteater at its work. Sitting bolt upright it watched the unconscious

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beast as it tore open fresh sections, and nuzzled with its long head in the break. Then, dropping on all fours, it ran up quite close and again sat up like a rabbit, to watch. The ant-bear, many times its own size, seemed to be rather a large proposition; but weasels are the most fearless of beasts, and the tayra trotted all around, occasionally wrinkling its nose in a noiseless snarl, and seemed to be trying to decide from which side to venture the attack. After a few moments it clambered to the top of the ant-hill and looked down upon the ant-bear, which paid not the least attention, seeming to consider the weasel not worthy of notice.

Suddenly the tayra made its decision and leaped squarely down upon the back of the ant-bear.

The back of the ant-bear was exceedingly well protected by the great brush of long dry hair, and the biting, tearing, black killer simply slid helplessly off to the ground, and quick as a flash the ant-bear turned and struck with its curiously-twisted front paw. The blow, backed by the massive muscles of the forearm, was a fearful one, for the great, incurving claws, the largest one longer than that of a grizzly bear and sharp as a needle, went through the side of the tayra as though it were paper, and, crushing the ribs, hurled the big weasel nearly six

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feet away, tearing open the whole side as the claws ripped their way out and leaving a great gaping wound through which the torn entrails slowly oozed. The ant-bear sat up on its flat hind feet and, turning its long head first to one side, then the other, like a bird, watched the tayra as it slowly regained its feet and dragged itself reeling and staggering away through the tall grasses. It managed to get perhaps a hundred feet away, and then fell in a heap as it lay there licking its awful wound.

The advance guard of a great multitude of the army ants on the march came upon its bloody trail and it was quickly covered by a black swarm. Its struggles were soon over, and after a little there was only another little heap of bones to mark the place. Every drip of blood, every hair even, was gone.

When the tayra disappeared the ant-bear turned slowly back, and once more gave its entire attention to the tunnels and towers of the ants.

And the quietness of the night once more settled down, and the shadowy dance of the lantern-flies went silently on.

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The Sexton of the

Jungle

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The Sexton of the Jungle

LIFE in the jungle is a tragedy. Everywhere the killers lurk or roam, — in the tree-tops, among the trunks, down on the ground among the roots, and underground beneath the roots.

Along a swinging liana creeps a treesnake, hunting through the night for the little sleeping monkeys. Down to the bank of the jungle stream, where a white boatbill stands watching for the little fishes that incautiously swim too near the shallows, steals a foraging crab-dog. Everything in the jungle is in danger, everywhere stalks the grim spectre. And over all, sounding, as it were, the solemn chorus to the jungle's multitudinous tragedies, ring out the strange voices of unseen birds. Some of the notes are mere soft, inquiring whispers, some are strange booming underchords, others like the baying of hounds and the barking of frightened puppies; but dominant, high, ringing sweet and sad and clear over all, is the tolling

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bell-like note of the sexton of the jungle, the campanero or bell-bird.

* * * * * *

In a basket formed by a network of vines and orchid roots, swinging between the trunks of two great trees was a beautifully constructed nest, its framework of twigs lined with threads or hairs from the inner coating of the seed pods of the Bombex vine. Sitting on the nest was a small olive green bird, perhaps ten inches in length, with a curious bare spot beneath the broad flattened beak. A little above the nest her mate was perched upon a vine. His plumage, in curious contrast to that of the hen bird, was snowy white, and a curious fleshy protuberance projected from his forehead, falling to one side of his bill. He sat silent for the most part, but at times the protuberance would lengthen till it was perhaps five inches long, then he would drop his wings, throw back his head, open wide his beak, and out over the jungle would peal the wonderful solemn bell-note. He, in his vestal robe, was the sexton of the jungle.

Among the branches far above the nest of the bell-birds a little band of marmosets were hunting for insects, clambering about among the twigs,

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"ONE OF THEM, IN PURSUIT OF A BIG ROACH, CLIMBED OUT ON AN EXPOSED BRANCH."

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prying here and there under the leaves and among the flowers, snatching at a passing butterfly, rooting out a big roach from its hiding-place between two lapped leaves, or a spider from the fork of a branch. They were pretty fellows, perhaps the least monkeylike of any of the great family of monkeys, with little, reddish brown paws like those of a squirrel, and wide black ear-fringes framing their serious, inquisitive little faces, their enormously long barred tails and hairy coats making them seem larger than they really were. They kept up a soft, high-pitched twittering, with a rising inflection which gave the notes an inquiring, questioning sound.

Although usually their activities were hidden from the high-flying swallows, fly-catching jacamars, and other birds flitting about the tree-tops, one of them, in pursuit of a big roach, climbed out on an exposed branch. Swinging slowly in wide circles in the silent spaces far overhead was a broad-winged Urubitinga hawk, — a black, sinister-looking bird, barred with white on tail and wing. His bill and the bare spaces at the base of the bill extending around the eyes were a vivid red. Sweeping slowly around, its keen eyes watching for any movement among the tree-tops, it caught a

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glimpse of the little monkey. Half closing its wings, it shot down to within a hundred feet of the branch where the little monkey was hidden, for the moment, by a tuft of leaves. With wide-spread wings and tail it held itself poised, then, as the marmoset emerged, snatched him from his perch and bore him screaming away over the tree-tops to a palm which thrust its head above the surrounding jungle. At that moment the loud notes of the bell-bird tolled forth a requiem.

Among the roots, down below the nest in the vines, was a small bare space of ground where were lying a number of great beans and pods, which had ripened and fallen from one of the big lianas overhead. The beans, over an inch in diameter, were the favorite food at this season of the year, of the agouti, and one of these slender, alert little creatures was running about and sniffing at first one and then another of them. It would pick up one and sit up erect like a squirrel, holding the bean in its forepaws, and nibble two or three bites, its keen eyes constantly on the lookout for danger. At the slightest sound or movement, it would disappear like a flash, darting under a great fallen leaf or arched root, but soon reappearing when its momentary alarm had passed. It was an

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interesting little creature, about as large as a good-sized rabbit. In color it was a greenish gray about the head and shoulders, the long black hair on the back shading into a bright mahogany red on the sides and flank.

It walked with rather long but jerky steps, like a tiny deer. With straight slender legs, wide-spread toes, and high-arched back, it was the personification of alertness as it moved rapidly here and there among the roots.

Finding one of the beans at that stage of ripeness most to its liking, it sat up to make its meal, gnawing at the hard seed with its powerful, rodent incisors. As the soft, scraping sound went forth, it caught the ear of a grison creeping on silent foot some distance away.

The big, active weasel sat up listening for a moment, then came running lightly over the roots. The grison, like the mink of the North, is an insatiable killer. It is also one of the few animals in the world whose markings are lighter in color on the back than underneath, the reverse being almost always the case. About the size of a small cat, it is a light pearl-gray along its back, sides, neck, tail and top of head, while the face and muzzle to just above the eyes are a deep reddish brown, a

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narrow white border dividing this color from the gray.

Springing lightly and noiselessly upon the high root behind which sat the agouti, it dropped squarely on the back of the unsuspecting rodent. There was a short struggle, then silence as the weasel lay sucking the life-blood of its prey. Then once more the solemn notes rang out as the bell-bird threw back its head and dropped its snowy wings.

A little later the grison sat back on his haunches, gave himself a hasty cleaning, licking his paws and biting and scratching at such parts of his fur as seemed to be slightly soiled; then, with a quick glance around and a tentative sniffing of the air, he trotted away among the trees. He quickly came to rougher ground where the trees were not quite so close together and big rocks thrust up among the roots. As he went forward the rocks rapidly grew larger and larger, and he soon came to the base of a high tree-covered cliff. In the face of this cliff, under the roots of a big fig-tree, he came upon the entrance to a small cave. As he came near he became aware of a peculiar heavy odor. He paused, sniffing sharply, then darted in. At once a great flapping of leathery wings and high-

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"UNDER THE ROOTS OF A BIG FIG-TREE, HE CAME UPON THE ENTRANCE TO A SMALL CAVE."

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pitched squeaks arose, and a cloud of big bats, pale grayish brown, with light, flesh-colored wing tips, began to pour forth from the entrance. Inside the grison held high carnival, leaping up and catching one bat after another, giving each one bite, crushing the head, then dropping it and catching another. Not till the cave was nearly emptied did he desist; then, after sniffing the dead bats and biting out the brains of two or three of them, he came out of the cave, climbed upon one of the great roots of the wild fig, stretched out and was almost instantly asleep. From back in the jungle the tolling of the sexton came floating sadly, sweetly, through the aisles of the forest.

The myriad of bats fluttered blindly away up among the trees, seeking the densest masses of foliage, for the bright light of mid-afternoon, though much dimmed by the dense foliage, was still too strong for their tiny nocturnal eyes.

The grison slept on the root till the sun had set and the night — deep and dark under the jungle roof — settled down. Then, waking with a start, he sat up, looked sharply around, yawned and stretched, then climbed up the face of the cliff to the top. Turning to one side he ran up a long slope to the point where the cliff came out of the rocky

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hillside, then around the curve of the hill, hunting among the rocks for any living creature with which to slake his ever eager blood lust. He found a small yapock opossum, but the overpowering odor of this little animal was too much for even the grison's not over-sensitive nostrils, so he let it live and raced on. Later, under an overhanging rock, he found the new-laid eggs of a tegu lizard. On these he feasted royally, eating the soft leathery shells and all; and when his hunger was satisfied he bit open the rest of the big eggs, not content until he had destroyed every one.

Just before daybreak he went running down the hill among the rocks to a shallow ravine, where a noisy, tumbling stream drowned its turmoil in a deep, still pool. As he neared the stream a big spectacled owl swooped down at him, but, recognizing him just in time, checked its descent with a few quick buffeting strokes of its wings. At the sound the pugnacious grison leaped upward, clutching fiercely but ineffectually at the big bird, which swept aside and sailed silently away to seek less dangerous game.

The grison raced angrily after the owl for a short distance, then, recognizing the futility of such a pursuit, turned again to its hunting. A little later,

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when the sun was well above the tree-tops, he came down to the foam-flecked pool. Running down a smooth, sloping rock beside the roots of a big tree, he startled a pair of great macaws eating the fruit on a low-hanging bough. At sight of the grison they woke the forest with their raucous cries and shrieks, flapping their wings and clambering about the branches, and keeping up this awful racket as he came down the sloping rock to the water.

Then, as he crouched to drink, he was obliterated, utterly, instantaneously swept out of existence.

From the cavity between the roots of the tree growing beside the rock, an anaconda had struck. Quicker than the eye could follow, the broad, triangular head had flashed forth and, in the same instant, two coils of the thick snake had been flung around the unsuspecting grison, and he was reduced to a small shapeless mass of fur, flesh and bits of crushed bone.

The macaws, with fresh screams and cries, flapped rapidly away, their long slender tails streaming after. As the harsh sounds died away, there came once more, faintly, so faintly that it was little more than a whisper among the tree-trunks, the soft, sweet, solemn note, the requiem of the sexton of the jungle.

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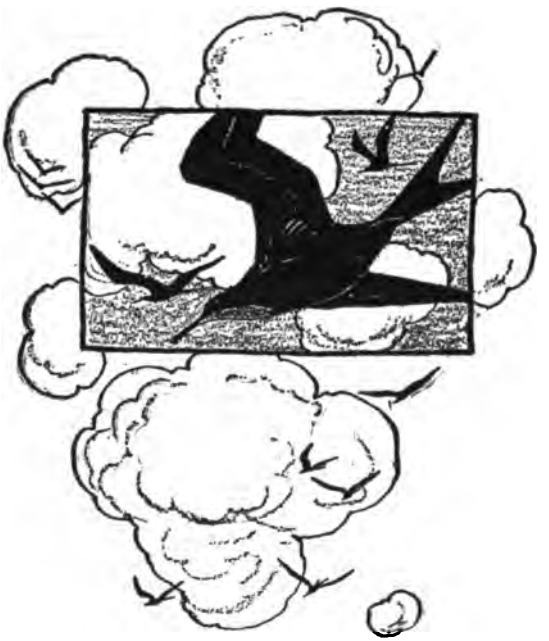
The Island of



the Buccaneers

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The Island of the Buccaneers

OFF the coast of Venezuela lies the island of Trinidad, which, at its western extremity, is nearly connected with the mainland by a chain of small rocky islets. These islets are of volcanic formation, and are extremely rough and indented with many deep holes and tiny caves and crevices. To the north lie the broad, stormy waters of the Caribbean Sea, while south and east is the calm, shallow bay. The "bocas," or channels, between the islands are very narrow, and during the rise and fall of the tides the water rushes through them with great force. These islands, containing no fresh water, are uninhabited save for colonies of sea-birds, which nest in the holes and crevices.

On one of the larger islands are a few clinging mangroves, and on these the brown pelicans have nested. On another island is a small colony of boobies or gaunets, together with a few terns. On the smallest islet of all, the one nearest the big island of Trinidad, a number of frigate or man

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o' war birds have founded a colony, one of the very few such colonies in the whole wide expanse of the Gulf of Mexico and the Caribbean Sea. They are big black fellows with curious long, hooked beaks and large naked throat-pouches. The young birds are grayish brown, not getting the black plumage until the second year. They have very long, narrow wings, and long, deeply-forked tails, and they sail slowly up and down the coast for miles and miles or far out over the sea.

For the most part they subsist on the toil of other birds, dashing down and threatening any lucky fisher till it either drops or disgorges its catch. They are the buccaneers of the air, taking toll of all the pelicans, boobies, gulls and terns, who are all expert fishers, leading quiet, honorable lives, diving and catching each his own fish, and all living in constant fear of the long-winged, fork-tailed black pirate.

In the bottom of a cavity on the north side of the islet, a pair of frigate birds had taken up their abode. There was no attempt at nest building beyond the collecting and irregular placing of perhaps a dozen small sticks, a merely instinctive act, for they served no real purpose, and the eggs were laid on the earthy matter which had collected in

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"THEY ARE THE BUCCANEERS OF THE AIR."

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the bottom of the cavity. This manner of nesting was rather curious, for other colonies, notably one in Mexico, and a second on one of the Florida Keys, build large platforms of sticks and twigs on the tops of mangrove bushes, similar in construction to the nests of pelicans. But birds of this family, the Steganopodes or birds with totipalmate feet — feet in which all the toes, including the fourth or hind toe, are connected by a web — seem to be able to adapt themselves to new conditions with great ease. For example, the pelicans on Pelican Island in Florida, having, by the very weight and number of their bulky nest-masses of twigs and sticks, killed all the mangroves on which they normally build, now make nests — mere heaps of dead grass with a very few sticks — right on the muddy ground.

In the cavity on the islet were two partly naked, black-skinned nestlings with patches of pure white down just beginning to appear on their backs, shoulders, and the tops of their heads. They were singularly helpless little creatures, lying, for the most part, with their heads sideways on the floor of the nest, having only just strength and energy to raise them and eat when the old birds returned from their marauding excursions. They were also

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helpless in a way quite different from the majority of young birds, in that their digestive organs were not sufficiently developed to assimilate the fish which was the only food they know.

They, in common with young pelicans and a few other fish-eating birds, have a special provision of nature in the way in which they are fed.

When the old bird gets a fish by fair means or foul, it immediately swallows it. The fish passes into its crop and is partly digested, that is, the juices of that organ dissolve the skin and membranes so that it becomes a soft, pulpy white mass. By the time the bird gets to its nest it has a crop full of predigested food for its young. The white, milky mass is regurgitated into the throat pouch and the young birds thrust their heads into the mouth of the parent and eat their full.

The parents of the naked youngsters were most successful pirates, sailing up and down the islands, taking toll of the pelicans and other birds at their fishing. A long line of pelicans would go sailing along the coast in single file, just skimming the tops of the waves, their widespread, narrow wings flapping quietly and almost in unison. Suddenly one would discover a fish. Opening its great bill, the sides of the under mandible sprung wide apart

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making a veritable dip net, with the pouch for the net, it would dive headlong, and would very seldom miss its prey.

In a moment it would rise and quickly regain the slow-flying line. Then came the robber! From far above, with set, motionless, angular wings and closed, pointed tail, the black buccaneer of the Carribean came gliding down a long, aerial plane, straighter than the flight of an arrow, — for there was no deflection, owing to gravity, — faster and faster, the curious black bird, not one third the bulk of its victim, darted to the attack. The slow, awkward pelican, trying hard to lose himself in the line of his fellows, would twist and dodge, but the result was always the same. As the man o' war bird drew near with threatening open beak, the pelican disgorged the already swallowed fish which was promptly gathered in by the pirate, which then withdrew, sailing lazily away either back to its nest, or, if the poor pelican did not yield enough spoils, to seek other successful fishers to rob. The pelicans were always easy victims, but sometimes the black buccaneers would find that what seemed a peaceful merchantman would have big guns concealed and the encounter would end somewhat disastrously for the pirate.

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On one occasion the male bird was circling high in air over the bay on moveless lazy wing, when it noted a large black-crowned white heron standing on a floating tree-trunk which had been carried out to sea by the current of the Orinoco. The frigate bird had seen but little of herons, as they do not often come out on the open waters, but are found, for the most part, along the rivers and marshy shores of the lagoons. The pirate sailed back and forth for a time lazily watching a pair of terns darting and flashing over the waters, when suddenly a movement of the heron caught his eye.

The big white bird had made a lightning-like stab with its long, spear-point beak and had captured a glistening silvery crevalle of about a foot in length. As the bird held up its head with the struggling, flashing fish gripped firmly in its long beak, the watching frigate bird, thinking only of its successful conquests of the big pelicans, came sliding down on its steep aerial plane.

The heron leisurely beat the struggling fish on the log till it was stunned, then, taking it by the head, straightened up and had just swallowed it, when it became aware of a big, black, threatening form dashing straight at its head. Like lightning the long neck was drawn back and, like lightning,

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"THE BIG WHITE BIRD . . . HAD CAPTURED A GLISTENING SILVERY CREVALLE."

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shot out again, the sharp, strong beak stabbing like a spear thrust. The stroke was a little too hurried or the frigate bird would never again have committed piracy on the high seas. But it was a glancing blow and merely struck through the thick, pectoral muscles of the left breast, missing the bones but inflicting a painful wound.

The frigate bird was knocked into the water by the impact of the blow, while the heron stood its ground, its plumage ruffled and crest raised all ready for a fresh attack. The pirate, however, knew when he was overmatched. He swam away for a short distance, then, finding that his wound, though painful, did not entirely disable his wing, he arose, flapping laboriously, and flew awkwardly away over the water to the island of the colony.

For a couple of days he fasted, for his wound was too painful for him to attempt extended flight, but on the third day he once more essayed the robbing of a pelican, and after that his life went on as usual.

For the most part the island of the buccaneers was invulnerable to their few enemies. In fact, the only menace to the peace and continued increase of the colony had been an occasional shark, one of which, taking up its abode in the vicinity

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the year before at such time as the young birds were learning to swim and fly, had snapped them up as they flapped helplessly down on the surface of the bay. Another year a terrific hurricane had come at just that time when many of the nests had contained helpless young, and the huge waves had washed almost over the islet, drowning many in their nests and beating out the lives of others on the rocks. But these occasions were of rare occurrence and the days of the colony were, in the main, quite uneventful.

But one calm, bright, tropical night there came a visitor to the island.

In a crevice between the steep rocks which slope down to the waters on the side of Trinidad nearest the islet, a big mottled bushmaster, the great deadly black and yellow snake of northern South America, had spent the heat of the previous day, which had been most intense even for that tropical climate. As night came on he crept out of his concealment and slid silently into the water, which he found pleasantly cool after the heat of his rocky lair. The flood tide had just turned, and as the great brute, perhaps ten feet in length, slowly swam to and fro cooling his mottled scales he was gradually carried out to sea. For a time he failed to

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notice that he was getting some distance from land, but after a little, tiring of the water, he turned to go ashore.

He was by this time fully a quarter of a mile out and a strong eddy was carrying him around in front of the islet. He swam strongly for the shore for a few moments, then, tiring of the effort, he lay on the surface while the eddy swung him back in a big circle toward the islet. Seeing a haven nearer than the one he had left, he swam to the rocks, crawled up them a little way and rested.

After resting for a time, he crept up on the island and, feeling the pangs of hunger, started on a hunt. He soon came to the cavity where the two black nestlings were sleeping cosily, tucked beneath their mother's wing. Thrusting in his big blunt head he received a savage peck from the mother frigate bird, who was sitting on her nest covering her two young ones. The snake instantly drew back and as quickly struck, its great poison fangs being deeply imbedded in the neck and breast of the bird. As quickly as he struck, the snake again drew back and coiled at the entrance to the nest.

For a moment the bird struggled, then all was

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still, and a few minutes later the bushmaster again intruded his head and, after sniffing over the dead bird, proceeded to swallow her. A little later the two young ones followed their mother, and the big snake coiled up in the crevice, nearly filling it up, to spend the following day digesting his meal in seclusion. The next morning the male bird, entirely recovered from its wound, came with food for the young ones, and, starting to enter the crevice, was captured by the enemy, and sent to join the rest of his family.

The second night after, another family was devoured in much the same manner, and, later, many others went the same way, the great brute regularly taking toll of the toll takers. On occasional nights he would devour the contents of two nests and on another he found the roosting places of the males and killed several at once. After a time the colony was perceptibly thinned, and would have been soon exterminated had not an old enemy of the frigate birds returned.

The big lazy shark which the season before had committed havoc among the young birds as they were leaving their nests, came in from the open sea and finding an upthrust rock covered with sharp corners of coral, had found it a fine place to rid

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himself of the limpets, leeches and other parasites which clung fast to his leathery hide.

He stayed in the vicinity for some time, making an occasional meal from one of the big tarpon which are everywhere in these waters. The shark was of that variety known as the dusky shark, about twelve feet long and about thirty inches through the deepest part, a long, graceful, sinuous, lazy fellow, sometimes basking for hours at the surface in the brilliant sunlight, his long dorsal fin projecting nearly two feet above the water. At other times he would dash into a school of tarpon like an express train, catching one of the big, silvery fellows, and chopping it in two, then more leisurely eating the sections. At times he would follow beneath the keel of one of the small fishing boats, and when the fisherman would catch a good-sized fish he would snap it off the line. On one occasion he took a bait which was rigged for him on a big hook with chain and stout, heavy line, but he was able to break away, and though the hook bothered him for some days, he eventually rubbed it out of his jaw and the sore spot soon healed.

After another very hot day which the big snake had spent in a shallow, exposed hollow in the sun-heated rock, he once more slid down into the water

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to bathe. The tide was not running very fast just at that time, but as he was lazily wallowing about in the cool water he was suddenly cut clean in two. Even while the shark's teeth cut through him the snake turned and buried his long fangs in the great head of his adversary. The shark rolled over unconcernedly and snapped up the neatly severed sections of the still struggling bush-master. Though deeply bitten and thoroughly injected with the deadly poison, strong enough to kill any of the land creatures of the jungles, in a very few minutes the great cold-blooded fish proved practically immune. The only after-effect of his adventure was a state of torpor which lasted for a few hours, during which time he lay motionless at the bottom.

After cruising about for a few days longer, the shark sailed away down the Trinidad coast, and was seen no more in the vicinity of the islet. The buccaneers resumed their calmly piratical existence with nothing further to disturb the working out of their life problems and the increase of their colony.

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"HE WAS LAZILY WALLOWING ABOUT IN THE COOL WATER."

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The Tree of Life

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"THE MONKEY . . . IN THE TREE-TOP MUST EAT THE FRUIT."

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The Tree of Life

"THE whole is equal to the sum of all its parts," says the old axiom.

The jungle is a complex whole. The trees are one of the parts, the streams another, the mammals another, the birds, the reptiles, and the insects still other parts. There are many besides, like the vines, the orchids and other parasites, epiphytes, fungi, mosses, ferns, etc.

All these parts are interdependent. Without the insect which bears the pollen from one of its flowers to another, a certain variety of trees must cease to bear fruit and, ultimately, perish. When that variety of tree has ceased to exist, the insect whose larvæ feed upon its leaves will be exterminated. Each living thing, animal or vegetable, is dependent, directly or indirectly, upon other forms of life. The great jaguar must be able to find and catch many of the lesser creatures or he will starve, and yet he must not kill them all or he will starve. The monkey and bat in the tree-top must eat the fruit, but they must not eat the pit or seed, which must be dropped to the ground far below, or the

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labbas or pacas, the agoutis, spiny rats and other rodents among the roots will starve.

The butterfly which carries the pollen from one flower to the other takes her pay, partly in nectar it is true, but how much more when she lays her tiny eggs on the under side of the leaves, and leaves them to the care of the tree. Here again she must lay great numbers of the eggs, yet not too many. Too few would mean that there would not be enough worms for the insectivorous birds and insects which prey upon larvæ, and too many would mean that the tree would be stripped of leaves and would die. The whole is the sum of all its parts. The balance must be maintained.

On the bank of a deep, wide stream flowing past the base of a rough, rocky forest-covered hill in southern Guiana grew a fine specimen of the yellow hog plum or wild cashew tree. It was just coming into bloom, and thrust the clusters of its small, spicy white flowers well above the surrounding trees.

One bright morning a dainty brown butterfly with cream-colored bars across its narrow, rounded wings came sailing along over the jungle. She seemed to be immune from the attacks of the birds, for several fly-catchers which she passed paid her

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no attention and a paradise jacamar glanced at her indifferently but darted out just afterward to snap up a small cream yellow butterfly. She belonged to the great family of the Heliconius, a family dominant in the Guiana jungles, as the papilios or swallowtails are in the northeastern United States.

Sailing airily along with little heed to her general course she came within sight or scent of the plum blossoms. Then she flickered away in an almost straight line down to a cluster of the white flowers, and thrusting her long proboscis into the heart of one, extracted a drop of the nectar which was just beginning to form at the bottom of the tiny cup. Soon exhausting the supply, she drew out the long, black, thread-like tube, and sailed away to another blossom. But she bore a tiny cargo.

Sticking fast to the proboscis, now curled up like a watchspring, were a number of yellow specks of pollen. When the butterfly thrust her drinking tube into the next blossom these specks were rubbed off against its pistils, and that flower, after paying its toll of sweets, ceased forming its stores of nectar and distilling its spicy fragrance and, after a day or two, dropped its petals. The slow development of the fruit had begun. The butter-

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fly spent the rest of the day flitting about the tree-top performing the same office for flower after flower, and when night came she hid under a leaf and slept. In the morning she was joined by another, and later still by several others of her kind which likewise sailed about from flower to flower. One of these flew up to her, and after circling about each other for a time in dainty dancing evolutions, the two flew down among the leaves together. The next day she spent sitting on a leaf, and the next after that she again went sailing about the tree-top, but now she gave the flowers no attention. She would flutter about a spray of young leaves for a little, then, alighting upon one of them, would creep under it, hiding there for some time. Later she would fly to another branch and repeat the performance. All day long she kept up her visits to the young leaves, and on every one she left a row of ten or a dozen tiny round eggs safely glued beside the midrib.

For several days she kept up the process until she had deposited her full quota of several hundred eggs. Each day her wings became more and more worn and beaten, and on the fifth day after she had come to the tree she fell weakened and exhausted to a big limb below the last leaf she had

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visited. Here was waiting a small lizard which, having none of the prejudices of the birds, snapped her up like a flash.

A week or two later the tiny eggs hatched. The larvæ at once began to take toll of the tree for the services their mother had rendered, eating into the leaves and growing rapidly. Now came the tree-creepers, wood-warblers, thrushes, wrens and greenlets, hunting these larvæ among the leaves, and besides the birds there were numbers of anolis and other lizards peering here and there snapping them up.

Hundreds of them were caught and eaten, but there were many which escaped and, fully developed, sealed themselves up in hard cases fastened to the under side of a leaf. Later, the leaf fell to the ground far below, bearing its burden, to encounter a new danger, that of the spiny rats and the little opossums, which would crunch their hard shells like paper, and eat them with great relish. Each day their numbers were lessened, and when weeks later, they came forth from their cocoons as perfect butterflies, they represented a very small fraction of the original family.

In the meantime the fruit which the butterfly and her mates had started on its way to maturity

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had ripened, and now came the army of the fruit eaters — birds and monkeys by day, bats and other monkeys by night, raccoons and coatimondis, opossum and iguanas. And a few days later down among the roots on the bank of the stream came the rodents to get the pits. Great capybaras, as large as hogs, spotted labbas, golden agoutis, the smaller agouti called the adourie, spiny rats, and even mice gathered to the banquet of ripened plums and the pits discarded by the monkeys and birds and bats. In the water, schools of fishes attracted by the same feast swam back and forth darting for the spot every time a splash told of a fallen plum. And on the trail of all came the killers.

One hot afternoon a toucan, which had just picked a plum, flew to a big limb below to eat it, when an ocelot, crouching on another branch under a mat of leaves, sprang at him. Missing its mark the cat struck wildly at the toucan as it sprang into the air. The blow served merely to break the wing of the bird and knock it stunned and bleeding to the ground fifty feet below.

The ocelot watched its fall down through the branches, then turned to hide again and wait for another opportunity to catch one of the many crea-

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"SPREADING his wings he shot down like an arrow"

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tures constantly climbing or flying about among the leaves above.

As the toucan fell through the air it was seen by one of the small jackal-like foxes which are occasionally found in this region. Almost before it struck the ground the fox was upon it, and in another instant was trotting away down the bank of the stream bearing the find in its slender jaws.

At another time a beautiful orange-colored cock of the rock came flying down the hillside, and, attracted by the fruit, was about to alight, when a big crested falcon caught a glimpse of it from his perch in the great tree where he was watching for an opportunity to make a feast of some one of the fruit eaters. Spreading his wings he shot down like an arrow.

The cock of the rock, noticing its danger when the hawk was almost upon it, darted sharply to one side. The speed at which the hawk was going was so great that he was carried ten feet beyond his prey before he could slow up sufficiently to turn. That ten feet was just enough to bring him within reach of the stroke of a mottled brown tree boa, which lay coiled up and waiting on a lower branch. The boa struck like lightning, snatching the hawk out of the air, and crushing

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him before he could make use of his sharp beak and talons.

Thus did the great tree feed the jungle children, from the tiny flies which sucked the juices of the ripe fruit, up to the great tapir which came among the roots seeking the fallen plums. Indirectly it fed the killers, from the wasps which hunted the flies and worms, up to the jaguar which came hunting the rodents and peccaries, or the jabiru, that giant stork which stood on the bank of the stream spearing the lizards and fishes attracted by the falling plums, or the crocodile which also followed the fishes and was glad to pick up any of the jungle dwellers which might fall in his way.

This was but one of the trees of the jungle. Everywhere through the great forest are scattered these and other fruit and nut trees, their fruitage ripening at different times of the year, so that there will be neither famine nor too great a feast. And at each of these trees the jungle tragedy goes on.

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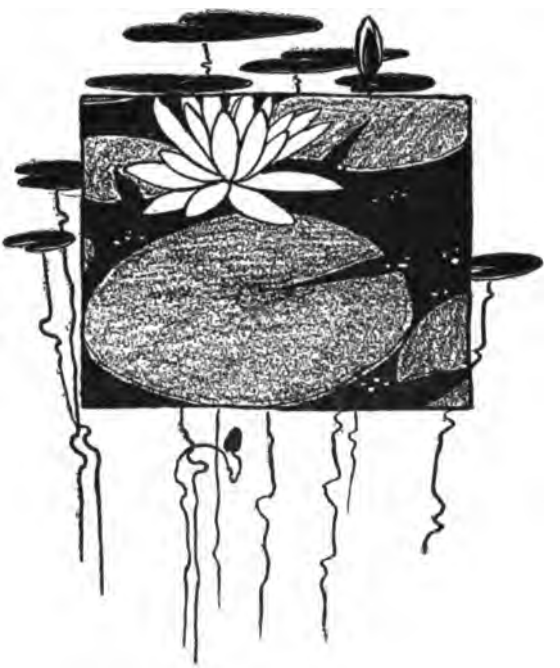
The Pond of the Lilies



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The Pond of the Lilies

THE coast region of Guiana is very low lying and marshy, the salt water penetrating up the mouths of rivers and streams for miles and miles into the interior.

There are many ponds and pools scattered through these low, swampy jungles, the waters of which are slightly brackish and stagnant, and covered densely with a most luxuriant growth of arums, lilies, water hyacinths and other aquatic plants.

At the seasons of swollen streams immediately following the rains, the streams which flow into and out of these ponds have a fair current, so that at these seasons — twice in a year — they show scarcely a trace of salt. But in the long dry season, when the surface of the ponds, evaporated by the great heat of the sun, sinks to near the level of the sea, the streams, at low tide flowing sluggishly toward the ocean and at high tide flowing slightly backward, become more and more saline. Hence, just before the beginning of the rains those ponds nearest the ocean are almost as salt as the sea itself.

Far back in the jungle where the salt water

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reaches but rarely, and then only in the highest tides, in a slight depression surrounded by splendid forest trees, lies the pond of the lilies. Small, occupying but a few acres, it is nearly covered by a most luxurious growth of water-lilies in great variety.

Tiny cabombas with yellow flowers and round leaves no larger than a half-dollar, nympheas with fine white flowers similar in size and form to the white lily of the lakes and ponds of the northern country, were interspersed with others bearing lovely pink and red flowers, their satiny green leaves as large as a dinner-plate or larger. Just at the head of the pond where the stream poured in its slow, brown water there grew a number of that most extraordinary plant, the huge Victoria Regia. This is the largest known of all the water-lilies, with huge, snowy white flowers with rosy centers, the thick incurving petals spreading, when the flower is fully open, over a circle fully eight inches in diameter. The monster leaves, many of them over three feet in diameter with upturned fluted edges, are capable of bearing up a little child or a whole family of ducks or any of the other birds which haunt these waters. It is for the most part a plant of the fresh water streams and ponds, and

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in this instance it thrived only at the mouth of the stream whose constant current, though slow, was sufficient to keep the faintly-salted water of the highest tides from reaching the roots of the big lily, even in the dryest season. It spread its great flat leaves over the water in an almost unbroken sheet from bank to bank, leaving but a narrow strip of clean, coffee-colored water in the center where the current was strongest. The smaller white lilies, and the tiny yellow ones grew up to the edge of the Victoria and spread in great sheets all over the rest of the pond, the spaces between their masses being filled for the most part with cabombas, their tiny imbricated leaves filling the angles between the larger leaves of the nympheas.

There were occasional small open spaces where the water was too deep for the plants to reach the surface, and the force of the current kept a sinuous winding ribbon of water open for nearly the whole length of the pond. The outlet was not discernible from outside the wall of foliage which everywhere surrounded the water, but in under the trees where the sunlight was excluded, and the masses of water plants could not exist, it could be found, deep and dark, winding its way among the buttressed roots.

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All around the shores of the little pond, back of the dense wall of leaves, was a narrow strip of open water, kept open like the outlet by the dense shade of the masses of foliage on the branches which dropped over clear to the surface, shutting out every ray of sunlight. A short distance out from the head of the pond there was a small, muddy islet covered with grasses and arums.

Not more than twenty feet across at its widest part, the islet was very irregular of outline, being merely a mass of decayed vegetable matter deposited by the inlet, and each year at the time of high water its area was slightly enlarged by fresh deposits of sediment.

This season of high water would work many changes in the pond. The accelerated current would clean out much of the dead leaves and other vegetable matter collected below the islet through the dry season. It would gouge out a part of the bank, dropping great trees into the water, some of which were borne away on the current. Others, heavier than water — like the greenheart — would sink, and when the waters again subsided, would be left half exposed where they had fallen; so there was always, at different points around the shore, great recumbent trunks, their upthrust roots

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"HUNTING SNAILS AMONG THE LOVELY FLOWERS."

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still fast to the shore and their crowns deep buried in the mud and silt of the pond.

The little islet had many occupants, for its muddy, weedy banks made most ideal nesting sites for the pretty jacanas and gallinules, which walked about over the lilypads and cabomba clumps in every direction. These birds made most beautiful pictures as they hunted over the lilies in little groups, the slender jacanas with their yellow beaks, jet black heads and necks, and warm orange-brown backs and wing coverts, making most striking contrasts to the brilliant blue gallinules with whom they associated, chasing insects or hunting snails among the lovely flowers together in perfect harmony.

The jacana is a most curious bird. About the size of a large pigeon, it has long slender legs, and remarkably long feet. These feet are a special adaptation of nature for its mode of existence, which is for the most part spent in walking about over the water plants.

The toes are extremely thin and attenuated, and are tipped with claws which are straight and pointed, and drawn out to such a length that they look greatly out of proportion, and, when the bird is in flight, trail out behind to an amazing distance.

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Their wings, the flight feathers of which are seen to be cream-color when the bird rises in flight, are each armed at the bend with a strong, sharp spur, like that on the leg of a cock, and are capable of being used with much effect. The gallinules, similar in proportion though more heavily built throughout, seem to be developed for the same life as the jacanas, though not to such an extreme, as their feet and claws, though very long and slender, do not approach those of the other bird, and they are without the wing spurs. They have the peculiarity of carrying the tail pointing straight up, like the wrens and some of the rails, and this habit, when they are in flight, makes the pure white under tail coverts very conspicuous. Both birds when in flight carry their heads stretched straight out and their long feet trailing behind, making a curious and rather awkward spectacle.

There were at least a dozen of the nests of the two birds hidden in the weeds on the islet. These nests were at the water's edge, and were made of a matted mass of leaves and grasses above which the weeds were laced together, hiding them completely from above. The gallinules, which nested a few weeks earlier than the jacanas, now had well-grown nestlings covered with black down, some

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of which were just leaving the nests to follow their parents about over the lilypads. The jacanas, on the other hand, were just beginning to lay their pretty greenish-brown eggs.

There were many other varieties of birds nesting in the trees about the pond, perhaps the most curious of which were a pair of boatbills. Belonging to the family of the herons, they differed from the other members in a curious development of the beak, which was broadened until it greatly resembled a round-bottomed, keeled boat turned upside down. They were cream-white in color save for long black crests and dark brown breasts. Their legs, feet and bills were slate-gray.

These birds had built a nest in the mass of foliage at the extremity of a big branch that thrust far out over the water. They would fly slowly up and down the pond, alighting on the branches at the water's edge, and watching for one of the curious little fishes known as the four-eyed fish to come swimming along with its curious eyes, — elevated above its head like those of a frog — projecting above the surface.

When the little gray fish would swim within reach, the boatbill would make a dart, and seldom indeed would the broad beak miss its mark.

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These little fishes are called four-eyed because of a curious opaque bar across the corner of the eye which gives them the appearance of having two hemispherical eyes fitted together, in place of one round one, on each side of the head. They are able to live for some time out of water, and are even known to climb out upon mud flats at times, and wriggle about, seeming greatly to enjoy the unfishlike proceeding. They were swarming everywhere in the pond, their curious eyes popping up in every open space between the lily leaves.

There were also several pairs of night herons nesting among the branches, and many small birds, cassiques, muffbirds, tanagers, tree-creepers, king-fishers, parrots, etc., made their homes in the walls of foliage. There were also three or four pairs of kiskadis, those noisy, yellow-breasted fly-catchers, which took upon themselves the guarding of the pond-dwellers from the hawks which are everywhere over the Guiana jungles, a constant menace to the birds and lizards.

When one of these feathered marauders would be so reckless as to venture over the pond, the kis-kadis would at once set upon him, pecking and screaming at him until he would be glad to beat a swift retreat, and they would follow him some

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"LEAVING THE WATER HE CROSSED A RIDGE."

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distance, even alighting on his back and pecking out his feathers, seeming greatly to enjoy the ride. It would be of no use for him to dodge and twist and turn, for the kiskadis belong to the family of the flycatchers, which are, perhaps, the speediest flyers in existence, and of which the kingbird is the best-known northern representative. But there were other dangers to the peace of the dwellers in and around the jungle pond.

One beautiful, sunny day from far back in the big, high jungles there came a straggler. A great otter, much larger than the otters of North America, a good seven feet in length, had been living in one of the large streams many miles back in the high jungle. Seized with a wanderlust he started up a small stream which flowed into the big one, and for two days followed its course, then leaving the water he crossed a ridge, and coming to a tiny brook followed it down stream.

After several days he came to the low country, and one morning swam out into the pond of the lilies. Diving beneath the surface he quickly caught one of the large, sluggish, vegetarian fishes, which swim lazily about among the lily stems and roots. Swimming to the island with his prey, he climbed up into the weeds and made a fine meal,

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then curled up and quickly slept, seeming to enjoy the sunlight, for he had been many days in the dense shadows of an unbroken jungle. He was the variety known as the margin-tailed otter from the laterally flattened tail with ridges along the sides, all other otters having smooth, round tails. His nose, too, differed from those of other otters in that there was no bare tip, the hair extending right over the end to the very openings of the nostrils. He also had a distinct yellowish-white blotch on his throat, and was much lighter in his coloring — a beautiful golden brown — than any other form of otter.

He slept there under the weeds in the broken sunlight until mid afternoon. Then, waking up, he sat erect on his hind feet like a rabbit and looked over the pond with his keen black eyes, glancing in every direction with nervous, jerky movements. Apparently satisfied with this survey he dropped on all-fours and proceeded to investigate the island. He went sniffing about, his long body looping like that of a caterpillar as he progressed at a sort of canter, his short legs giving him a curious, rocking gait. Coming upon one of the gallinule's nests he sniffed the black nestlings, and partly from hunger, partly in play, he bit off their heads. Tak-

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ing the body of one of them in his jaws he slid into the water with it, and, rolling about until he cleared a space of leaves, proceeded to have a game of ball.

Lying on his back in the shallow water he tossed the black, downy body of the nestling up in the air over and over again, catching it, sometimes in his forepaws, simetimes in his mouth, and seeming to enjoy the sport immensely.

After a time, tiring of this, he let the nestling fall upon the water and dived, or rather rolled, under it, coming up with it on his back. Then rolling over again he came up under it again, this time with it on his throat; then diving clear of it he came up with a rush, hurling himself clean out of the water, and over it; then once more he slid under it and lay on his back, tossing it in the air with his forepaws.

After a time he stopped and lay quiet on his back for some minutes; then, seeming to forget the tattered ball of down and flesh, and soft, baby bones, he swam away through the lilypads to the channel to look for a fish.

The gallinules and jacanas were greatly frightened and fled to the farthest end of the pond, cackling away in their thin, high voices. A little

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later the big otter returned to the islet with another fish, and when he had eaten the choicer parts he again slid into the water and swam away to explore the pond.

First he swam down the length of the open channel, then back to the Victoria Regias at the head, and through them to the wall of foliage. Diving under the hanging branches he came to the surface in the strip of open water surrounding the pond, and started to explore the banks. As he climbed out and ran up the roots of a great tree, he never noticed a quiet form which lay outstretched on a recumbent log partly in the water just below where he had come ashore. It was about the same length as himself, but much heavier, and was covered with bony plates. It was one of the small green crocodiles which infest all the brackish waters of the Guiana costal regions. After the big otter had trotted away up the bank, the crocodile slid smoothly into the water, and with nothing but its eyes and nostrils above water swam silently along beside the bank after him. It soon lost track of him as he raced about among the trees, and when he turned back to the water, striking the bank about where he had left it, the crocodile had passed some distance farther up the

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"A QUIET FORM WHICH LAY OUTSTRETCHED ON A RECUMBENT LOG."

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channel. He slid into the water and swam away, happening to turn down the channel this time instead of up, swimming for the most part with undulatory motions of the body like a seal or an eel, instead of with strokes of the feet like most other animals.

Nearing the foot of the pond he came to a spot where the water was freshly stirred up and muddy and some sort of a disturbance was going on outside of the barrier of foliage. He was always ready to investigate any disturbance, and, diving with a long curve, he slid under the barricade, and came to the surface beside a great, smooth, gray form which was rolling, in fact wallowing, in the shallow water. It had eaten away the leaves and flowers of the lilies for quite a space, making a soiled, unattractive spot in the beautiful lily carpet of the pond, and was lying on its back resting in the warmth of the late afternoon sun. It was a big manatee or sea cow. A great, harmless, sluggish creature, at least ten feet in length, and as large in girth as a sugar barrel, it is one of the few strictly aquatic mammals left upon earth. It had two short stiff flippers in place of fore limbs, and the hind limbs and tail seemed all welded into a wide, blunt, rounded tail.

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Its head, small for so large a creature, was rounded, with a blunt muzzle, the upper lip divided below the nostrils into two great thick padded halves, which it used alternately when eating, similarly to the way in which a hippopotamus eats, by reaching forward, first with one side, then the other, and "schlooping in" the soft vegetation on which it feeds, and of which it eats enormous quantities.

It was lying on its back, its great breast rolling up out of water, looking like a barrel with a deep crease down the center. As the otter reared his round head high out of water to see what this strange creature might be, it slowly rolled over, one of the flippers sticking up out of water for a moment, then sinking as the great body rolled; then the broad, flat, rounded tail rose out of water, and came down with a flap. This startled the otter somewhat and he dived backward, and came up again about ten feet farther away, and again reared his head high on his long neck.

Then the body of the manatee slowly sank, and the curious blunt head rose out of the water and faced the otter. There was a certain similarity in their appearance which was almost ludicrous, for though so unlike in almost every way, they both

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had blunt, rounded noses, and decidedly similar poses.

The otter, though knowing little fear of anything in the water, had never encountered anything of this nature before, and when the manatee dropped back with a great splash he turned and dived away among the lily stems, making for open water.

His course was marked by the sudden disappearance of the leaves in a long waving line out to the open channel. When he came to clear water he stopped and raised his head to see if he was followed. Seeing nothing, he swam more slowly up to the islet of the birds' nests, and, clambering up the bank again, curled up and slept.

Each time he appeared in the pond was the signal for a fresh fright for the birds stepping daintily about on the lilypads, and they would fly up and down cackling vociferously, and when he came to the island, the mother birds, whose nests were at that side, went flapping up from their nests, and flew around overhead in the greatest anxiety. And well they might, for though the otter preferred fish to any other diet, he would never pass a nest without investigating it, and in a spirit of mischief destroying all that it contained.

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He stayed at the island for several days, and, though he never really hunted for them, he stumbled on five of the nests and ate the eggs or bit off the heads of the young birds as he found them. He often saw the manatee, and lost much of his fear of it, but its bulk was so great that he gave it a pretty wide berth; but he never saw the green crocodile, though that astute reptile saw him on several occcasions and tried to follow him, but the otter was so active that he unintentionally eluded the crocodile each time.

One day, however, when the crocodile was lying in the water beside a log, the otter, which had been chasing a fish, darted under the log from the other side and came to the surface with the fish in its jaws right beside the green reptile.

With a mighty swirl of its powerful tail the crocodile lunged forward and snapped at the otter, catching him by the side as he dodged away, startled by the movement. Then came the battle to the death. The otter, dropping the fish, turned, and writhing down under, ripped and tore at the strong, leathery hide of the reptile's throat. The crocodile was sinking back into the deep water, hoping to drown its prey, but the otter was almost as well equipped to stay under water as the crocodile and far more

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"HE OFTEN SAW THE MANATEE."

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agile, though the reptile was much the stronger and heavier.

As the otter made an opening into the throat of the crocodile, it commenced to shake him as a dog would shake a rat, the great teeth of the reptile ripping and tearing at the otter's side; but still he bit and tore away at the crocodile's throat. Suddenly the teeth of the great reptile tore out a mass of flesh and hide from the side of the otter, and almost at the same moment the teeth of the latter reached the jugular vein of the saurian.

The water was stained to a crimson as the blood of the two mingled. For a few moments the crocodile thrashed wildly about, then sank to the bottom and died.

The otter, horribly torn, came gasping to the surface and crawled up on the log, where he lay feebly licking at his awful wound. Soon his head drooped, and with a convulsive shudder, he rolled off into the water and sank slowly to the bottom beside the crocodile.

The pond settled once more to its former peace and tranquillity. The jacanas and gallinules never knew what had happened to their enemy, but soon forgot him, and set about the rearing of fresh families of eggs and downy young birds; and the

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incessant, harsh cries of the kiskadis were the only discordant note in the lovely picture, save the muddy feeding places of that fat, lazy, happy, stupid, harmless creature, the manatee.

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The Trail up the Wind

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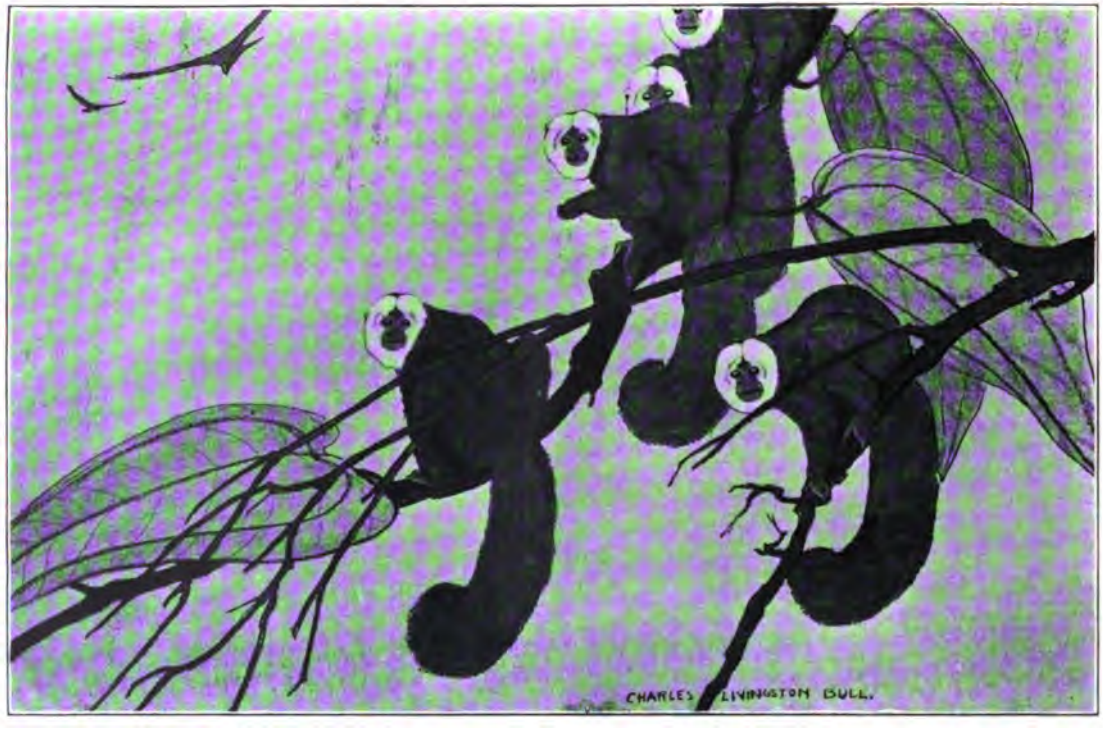

"A SMALL BAND OF WHITE-HEADED SAKI."

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The Trail up the Wind

THE roof of the great Guiana jungle was still so wet and dripping that down below in the deep shadows among the trunks it seemed to be raining, though the black clouds had broken and were passing over. The tropical sun was shining straight down, and the soaking forest steamed with the noonday heat. A small band of white-headed saki or foxtail monkeys peeped out from under the broad, heart-shaped leaves of a tail-flower arum growing like a parasite in the topmost fork of an enormous waracaba tree. No enemies being in sight, the little animals yielded to the lure of the returning sunlight and emerged from their shelters to dry their draggled fur. This accomplished, they slipped back into the shade of the broad arum leaves, for few of the jungle creatures can long endure the perpendicular fiery lances of the noonday sun.

After a little time a faint breeze came drifting over the jungle bearing many odors, pleasant and otherwise, of opening flower and ripening fruit. One of the monkeys sat up and sniffed long at a

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current of air on which was borne a faint, sweetish, spicy odor. With a little coughing note he caught the attention of the rest of the band.

Sniffing at the enticing sweet-scented breeze they all scampered away up the wind through the tops of the trees, keeping in the shade for the most part and finding secure roadways across slender branches a hundred and fifty feet from the roots below. At times as the breeze would die out they would slacken their pace and lose interest. Or again they would meet with some adventure which distracted them from the object of their trip. But whenever the reviving breeze brought back that faint, far-away odor the little bank resumed its quest, following unhesitatingly that alluring, elusive trail up the wind.

The unofficial leader of the band, he whose sensitive nostrils had first detected the far summons borne faintly down the breeze, was in appearance distinguished from his fellows in little except a somewhat more alert bearing, a hint more of decision in his movements. His weight was about that of a small cat, but so deep and coarse was his dark gray coat, so long and bushy his fox-like tail, that he looked much larger than he really was. His inquisitive little face was framed in yellowish white

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on cheeks and forehead. Like most South American monkeys, the saki are less suggestive of human beings than are their kindred of the Old World.

As the band scurried through the top of a monster lightning-scarred mora tree, the leader discovered a big nest of termites, or so-called white ants, which capped the broken end of a dead branch like the thatched roof of a little hut. Upon the nest sat a tiny cyclothurus, or woolly anteater calmly tearing holes in it with his strong, sharp claws. Then, nuzzling in the opening, he licked up the ants and their eggs, darting his long, flexible, viscid tongue in and out of the tunnels leading in every direction through the nest.

The monkeys gathered round to watch the pretty silky-furred little creature, which paid no attention to them till the leader, more curious than the rest, ventured to reach out and touch him. Like a flash the anteater struck out with one of his front feet, and the two long sharp claws inflicted a painful prick on the investigating arm. With a yelp the monkey bounded away and the rest of the band, timid and very easily frightened, bounded after.

As they went on over the forest, up and down, in and out, with that enticing odor ever growing stronger, they came to a break in the network of

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branches caused by a little stream down below them, which, spreading out to fill a slight depression, made a small pond.

In a tree overhanging the pond a colony of yellow-tailed cassiques or bunyas, those big orioles of the tropics, had built their long pendulous nests, a dozen or more of which were hung from the tips of slender branches swinging above the water. Espying the nests the monkeys at once tried to rob them, creeping out on the branches as near as possible but not daring to climb down the three feet or more of slender neck to the entrances, knowing that the fragile structures would break under such an extra weight. Before the little robbers passed on, however, two of the nests were despoiled, access having been found to them by means of a pliable branch which was made to swing within reach of the entrances. Unable to complete the sacking of this feathered village, the monkeys resumed their march, leaving the inhabitants in a state of shrill and fluttering excitement.

After a detour to get around the pond, the band came upon another and very different nest. This was the paper-covered waxen home of the great glistening blue bees, and was built on the underside of a branch among the trailing aerial roots

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"TWO OF THE NESTS WERE DESPOILED."

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of an orchid. The paper covering was quickly torn open, exposing the waxen cells which the monkeys ate with much gusto, honey, eggs and grubs proving alike acceptable. Their thick hairy coats rendered them impervious to the stings of the enraged insects, which they also caught and devoured. When the nest was despoiled of every cell and every last vestige of honey, they continued once more on their journey up the wind.

In another tree-top they found a beautiful orchid just coming into full flower and captured several resplendent butterflies, which were seeking nectar in the deep cups of the lovely blossoms. They were continually hunting out small lizards, spiders, cockroaches, beetles and other insects, and in one tree-top they came upon a great colony of the larvæ of one of the bix sphynx moths feeding on the leaves of an aristolochia vine, and here they made a great feast.

While crossing a small open space on a swinging liana they were thrown into a sudden panic by a slender brown tree snake, with a curious attenuated nose. Harmless though this particular species really was, it was enough for the monkeys that it was a snake, their tribe's immemorial foe. After a wide detour had taken them around the object

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of their dread, they resumed once more the trail up the wind. Yet the terror had not entirely subsided in their little hearts when they came, at dusk, to the end of their quest. This was a great wild cashew tree, the source of that seductive fragrance which had come to them from afar down the aerial pathways of the forest. From its branches hung curious yellow fruit, resembling plums with the lower half of the pits exposed. Here was a scene of excitement and activity, for many other of the jungle children had answered the summons of that enticing scent. Among these were marmosets, spider monkeys, squirrels, opossums, a porcupine, parrots, toucans, macaws and many varieties of the fruit-eating cotingas. Wasps, bees, butterflies, ants and beetles also swarmed around the yellow fruit, adding to the general sense of commotion. And now the creatures of night were gathering, as the short tropical dusk came on, and the little monkeys, after stuffing their cheeks with a few of the sweet plums, ran away to a nearby tree in the top of which were great masses of arums, orchids and other airplants and parasites. Crawling in under the broad leaves of a giant airplant, they disappeared for the night.

As the darkness came down the character of the

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jungle changed. Many of the day flowers closed their petals, and a great variety of night-blooming flowers opened out, filling the air with new odors. The brilliant butterflies, bees and wasps gave place to lovely great soft-winged moths in beautiful mottled browns and grays. The hard-plumaged birds of day were replaced by the fluffy owls and whippoorwills and nightjars. Among the higher animals the predatory ones came forth to their hunting, while the harmless ones of the day hid away in fear in the densest foliage they could find, for while there are countless tragedies constantly being enacted in the jungle, the great majority of them are hidden under the curtain of night.

With the change of actors came the change of sounds, — the night-voice of the jungle. First the toads and frogs peeping, rattling and croaking; then the cicadas and locusts filing and grinding; the curious complaining notes of the nightjars and whippoorwills; a snarling cry of an ocelot; the coughing roar of a jaguar; then the climax, the most wonderful sound of the jungle, the weird, solemn chorus of the howling monkeys swelled out, fairly filling the forest, and drowning all other sounds with its resonant power.

The great cashew tree with its sweet fruit and

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attractive perfume was still a center of activity, for the big fruit-eating bats were there in great numbers, among them several vampires dashing about, more active of wing than most birds, biting out chunks from a ripe fruit as they passed without a pause, then circling around till the mouthful was eaten and then back for another bite.

One of the vampires, circling away from the fruit tree, came to the clump of great leaves under which were hidden the little monkeys. With keen nose working it hovered for a moment on noiseless wing just above them, then light as a feather drifted down under the leaves.

For the most part the jungle beasts when sleeping protect themselves from the attacks of the vampire by hiding those parts of the body not protected by long hair, and were it not for their fruit-eating, the bats would become extinct, as it is very rarely that one gets a meal of blood.

The monkeys were curled up, huddled together for warmth and protection, in little clumps of three or four, their tails curled around almost covering them, and the bat hovered beside first one clump and then another looking for an exposed ear or hand or foot.

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From one of these little bunches of monkeys a tiny hand-like paw reached out and grasped the stem of the great leaf just overhead, close beside another sleeping group. The bat found the unprotected paw, floated down beside it, and was about to penetrate the skin with its tiny sharp teeth, when a monkey in the nearby group happened to raise its head and look around. Seeing the bat, as quick as a flash it reached out and clutched it by the wing, and with a few quick bites killed it. The commotion awoke the others of the band, and they joined in tearing the bat to pieces. A small part was eaten but the rest was dropped to the ground far below where it was devoured by a little yawarrie opossum, that curious, slow-moving creature, whose odor is so awful that the hungriest of the other beasts give it a wide berth.

The monkeys went to sleep once more, and were undisturbed till morning, when at the first gray light they came out and made for the delectable cashew plums.

But for one of the little band fate waited, poised and relentless, in the midst of that morning fragrance. For over night a passing puma, arrested by the signs and scents of many jungle creatures, had climbed into the cashew tree, and now crouched,

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well screened by the dense foliage, on a big horizontal branch a hundred feet above the ground.

In the hush of dawn the monkeys came quietly through the tree-tops, suspiciously and cautiously at first, then, as the light grew stronger, with more confidence. They came to the big fruit-tree on the jump, bounding fearlessly from branch to branch, gambolling and racing as unconcernedly at that dizzy height as if the floor of swaying branches was solid earth. As they approached, the puma gathered its feet together and crouched flat, with lowered ears and intent eyes.

At last two of the monkeys reached a thick branch about ten feet from where the great cat waited, hidden behind a wall of leaves. One of the two was he who first responded to the far-flung summons of the cashew tree. As usual, he was a little in advance of his companion. As he paused to glance back the puma sprang, a bolt of velvet and sinew, and the little life was crushed out under the sudden, silent claws.

The other monkey, making a desperate backward leap into space, sailed down, down toward the ground, more than a hundred feet below. A thin vine, which snapped in two with the force of its impact, momentarily checked its fall. Then the

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"SAILED DOWN, DOWN TOWARD THE GROUND."

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little body struck a slender branch, to which, by a supreme effort, it managed to cling. Climbing up this to the trunk, it went screaming and barking away through the tree-tops after the rest of the badly frightened band. The puma stood looking after them for a few minutes. Then with a savage snarl and a twitch of the tail he climbed back into his fragrant ambush, the body of his victim crushed between his jaws.

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The Wide-winged Monarch

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"OUT FROM AMONG THE ROCKS CREPT A LONG, SLENDER, TAWNY CAT-LIKE CREATURE."

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The Wide-winged Monarch

THE broad, flat, grassy savannah stretched up to the very base of the rocky, forest-clad mountain.

The grass was springing up fresh and green, for the daily rains had begun. The dry, baked-out grasses of the last season, set on fire by careless Indians, had long ago been burned off clean to the ground, and now the new growth was a few inches high, carpeting the wide plain in brilliant living green. A few hundred yards out from the rocks at the base of the mountain two lusty young bucks were prancing about each other, shaking their antlers. They were savannah deer of the Guiana wilds. Tall and graceful, they were not unlike the white-tailed deer of the North. As they danced about in the bright grass, fencing for an opening, out from among the rocks crept a long, slender, tawny cat-like creature. Crouching flat to the ground, it stole forward so slowly and stealthily that its movements were hardly perceptible.

Taking advantage of every irregularity and de-

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pression, it crept on till it came to a shallow, irregular watercourse. This was little more than a ditch, with no running water save when the rains were heaviest, and its general direction was toward the fencing deer. The puma, instantly taking advantage of the good cover, dropped in and raced down the dry bed until it came to the point nearest the young bucks. Here it crept up and, peering cautiously over the bank, crouched, watching them, in hope that they might come within reach. For some time they merely danced around each other, and the cat was just at the point of risking all by trying to creep closer when it noticed a movement much nearer and to one side. It was a slender, graceful doe, which had been lying in a slight depression watching the bucks fighting for her favor. She had just risen and was grazing, walking slowly away near the edge of the cut just beyond. Dropping softly back into the watercourse the puma hastened noiselessly on, keeping close under the edge of the bank.

Coming to the point which it judged was nearest to the doe, the big cat again cautiously crawled up and peered over the edge. The doe was standing with her side toward the watercourse, looking directly away at the bucks. The puma darted for-

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ward a few steps and sprang, landing upon the flank of the doe as she dodged away, and quickly pulled her down. The two bucks raced away across the grassy plain as the puma tore open the throat of the doe.

It was a glorious afternoon; little white fleecy clouds dotting the clear blue sky in every direction, their shadows chasing each other across the landscape. The air was clear and dry, so that objects at the very horizon were as distinct as though they had been but a short distance away, and the heat of the tropical day was tempered by a cool breeze which poured down from the mountain-tops.

High up in the sky there could be seen a number of black dots floating slowly about like motes in a sunbeam. They were in small groups of four or five, circling about with a lightness and airiness which seemed to have no connection with the heavy earth and its power of gravitation. Some few of them were even higher than the lower-lying clouds, and would disappear as one of the little vapory films floated between them and the earth.

As the puma crouched motionless over its prey, a few of the dots nearly at the zenith slowly began to grow. Larger and larger they became, slowly

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evolving into black, wide-winged birds. As they drew nearer and nearer, circling down in an ever-narrowing spiral, and as others from farther away gathered and swung down on long planes, they seemed to form a great revolving funnel, at the mouth of which were the puma and its prey, the top extending well up toward the clouds.

They were the black vultures of tropical and semi-tropical America.

Not quite so large as the turkey buzzard, their naked heads are black instead of red, while their short, square tails give them a different aspect from the other vultures. The feathers of their wing-tips, too, are more widely separated, having almost the appearance of widespread fingers. Their wings extend little more than five feet when spread to their widest expanse, while those of the buzzard usually spread more than six feet.

More and yet more of them came, until the great irregular funnel consisted of over a hundred big black circling birds. Then the curious formation seemed to break up, some of the vultures alighting on the ground at a respectful distance from the cat, while the rest circled independently of each other, some swinging in one direction, some in another, some in small circles, some in spirals and

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figure eights, until the air seemed filled with a maze of silent black forms crossing and recrossing.

The puma, a female with two tiny kittens waiting for her in a den high up the mountainside among the rocks and trees, looked up and snarled with anger, for she well knew that if she were to leave her prey for a short time there would be nothing left but a few scattered bones when she returned. She looked long at the nearest point where the rocks thrust out into the savannah beyond the edge of the forest; then, glancing up and snarling softly at the vultures, she seized the doe by the neck, lifted it partly clear of the ground, and, half carrying, half dragging the bulky long-limbed form, started for the point of rocks. The doe was a fairly large specimen of its kind, weighing perhaps seventy-five pounds, while the puma, of the South America jungle variety, which is never as large as the big cat from the Western mountains, would not have weighed more than sixty. She was, however, very muscular, and managed to drag her burden over to the rocks, and up among them for a short distance, but not quite far enough to reach the shelter of the trees. Coming to a spot where her farther course was barred by a sheer wall of rock six feet in height, she was forced to stop. She

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looked to the right and left as far as she could see, but there was no place where the ascent was less abrupt; in fact, the shelf got higher and rougher in both directions. The big black birds had followed, hovering just above in steadily augmenting numbers. For a few moments the cat crouched on the ledge above her prey, resting and watching the birds.

Suddenly she shot into the air and clutched one of them which had ventured to sweep past a little too near. With one swift bite she killed it, then, dropping it in contempt, glared up at the great flock, which, learning caution from their companion's fate, swung about at a little greater distance from the harassed, vengeful puma.

Finding that she could not get the carcass up the ledge, she stretched out beside it, and began rapidly to eat her fill, choosing the tenderest parts. Ripping open the abdomen, she found the liver and later the lungs, heart, and so forth, which she quickly gulped down. When she had eaten all she could, she tore off a great strip of flesh from the side, and with a last savage glare at the vultures sprang away up the mountain, bearing the strip of meat in her strong jaws. She was hardly gone when a number of the birds dropped to the rock

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"DOWN THROUGH THE GREAT FLOCK SAILED A LARGE BIRD."

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about the carcass, and the boldest of them were about to commence their meal when they all arose once more, flapped away to a little distance, and resumed their circling. As they flew about, down through the great flock sailed a large bird, the black vultures respectfully making way as it came.

Alighting majestically on the ledge above the carcass of the doe, it looked at it with much interest, then, with half-spread wings, leaped lightly down, and thrusting its head into the cavity under the ribs started its gory feast. The black vultures kept their distance, though some of them sailed down and alighted upon the rocks around about to wait until the big bird should be satiated. It was nearly twice the bulk of the vultures, with wings spreading at least nine feet. In flight it seemed to be similar in form, with the same short, square tail and the same widespread, finger-like wing feathers as the birds of the big flock, but the coloring was very different.

It was a splendid example of that most beautifully and strikingly marked bird, the king vulture. Its shoulders and back were a satiny fawn-cream, while, in striking contrast, the long-flight feathers of the big broad wings, both primaries and secondaries, were jetty black, as was also the square tail.

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The breast and under wing coverts were snowy white, and the curious downy ruff around the neck was a slatey gray. The head and the neck above the ruff were entirely naked, but of a most bewildering and dazzling array of all the raw, brilliant colors one could find in a paint box. The top of the head and sides of the neck were pure vermilion; the throat and back of the neck, clear lemon-yellow; a curious wattle on the back of the neck and the big carbuncles on the forehead, as well as a part of the strong hooked beak, were deep chrome orange; the sides of the head were splashed with blotches of cobalt and white; the iris of the eyes, white; a small circle around them, red, and the tip of the beak jetty black. Altogether a most astonishing array of colors. However, at a little distance, they seemed to blend into a reddish orange which was very effective, with the pearly-gray of the ruff and the cream and black of the wings.

He seemed to be veritably the king of the vultures, if one could judge by the respect in which the black swarm held him. He was crowned, most appropriately, with the bloody color of death, for the vultures live only by the death of the other jungle children. The pumas, chief of the killers,

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are the unwilling patrons and providers of all the vultures of this immediate region.

In the meantime, the big, slender cat had hastened away. Around the mountainside, among the rocks and giant tree-trunks, she carried the meat to her kittens who waited, hungry and impatient, in the den, a deep cavity among the rocks nearly a mile away.

Reaching the entrance, she gave a low call, and, as the kittens came tumbling to meet her, she dropped the meat and fell to licking them with her rough tongue. There were two of them, cunning, fat little things, just old enough to run clumsily about and play awkwardly. They fell upon the big strip of meat and began to chew at it, growling savagely at each other as the mother's big rasping tongue combed away at their faintly-spotted brownish coats.

Sometimes the vigor of her licking would tumble them clean over, when they would scramble to their feet again and chew and tear away at the meat, their tiny milk teeth being neither long nor strong enough to make much impression on the tough fibre.

Soon they tired of this, and, as the mother dropped on her side, they nuzzled in her deep fur,

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and fell to nursing away in great contentment. As they lay there in the cool shade at the entrance to the den they made a most engaging picture. The babies were utterly oblivious to everything; the mother, on the contrary, was alert to every sound, movement or passing odor. Her great keen eyes took note of each falling leaf or fluttering butterfly or bird which stirred within sight, and once, hearing a rustling of the leaves just behind a rock a little below her, she jumped up, leaving the cubs in a tumbled heap, and trotted off to investigate.

It was only one of the little red-necked, greenish-gray lizards, and when she saw it dart away she turned back to her cubs. All the jungle mothers have reason to be nervous, as they well know, and even the puma was in constant anxiety for her cubs, for she could never know when, in her absence, the great boa might come creeping to her nest, or a wandering jaguar might find its way up from the lower jungles which were its usual haunts. Or possibly the tayra, that big, black weasel, knowing her to be absent, might have the hardihood to steal into the den and murder her kittens. She feared none of these for herself, for she knew that neither snake nor tayra would

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"ALERT TO EVERY SOUND, MOVEMENT OR PASSING ODOR."

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dare to brave her long sharp teeth and claws, and no jaguar, save a large old male, could hope to conquer her when she was fighting for her young.

After a time the kittens, their appetites satisfied, left off feeding and began to play with each other, rolling and tumbling about, sometimes pulling at their mother's paws or tail, the tip of which she would twitch, watching them with pleased, half-closed eyes. After a little, tiring of this, she called them inside the den, and they all three curled up and slept. Some time later, just after sunset, she awoke and, arising without disturbing the cubs, walked out into the half light, yawned and stretched, and, noticing that the ants had begun to steal bits of the meat, proceeded to eat it herself. Then, after a careful glance in every direction, she went down the mountainside a little distance to a spot where a spring bubbled out from under a mass of tumbled, moss-covered rocks. Crouching beside the bubbling pool she drank long and deeply, lapping up the water with her big, rough tongue. When she had drunk to her satisfaction she retraced her steps to the cave, and, curling up beside her kittens, slept again.

The king vulture ate eagerly for a short time,

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tearing out the bits he liked best. As he feasted, another of his kind came sailing down from the heights, and, alighting beside him, fell at once to tearing away at the meat. The newcomer was even larger than the first intruder, though almost exactly the same in marking and coloring. The first one looked at it a moment, then, walking over, reached out and rubbed his beak and the side of his head against the wing of the other in an almost caressing manner; and as the other raised its head they rubbed their beaks together in a most amicable way. Then the newcomer fell to feasting once more while the first king vulture tore off a strip of flesh and turned away from the banquet. Spreading his wings and bearing the strip in his strong beak, he ran a few steps, leaped into the air, flapped his wings violently a few times to get a start, then sailed away around the mountain, higher and higher, in the same general direction as that taken by the mother puma. The other vulture, the newcomer, was his mate, and he was hurrying away to their nest in a great cavity in the side of a monster tree, where a huge branch had been torn off by one of the hurricanes which occasionally sweep in from the Caribbean Sea. The rain had settled in the torn wood and rotted it, giving

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the spores of fungus growths a chance to obtain a foothold. These had destroyed the wood for some depth, and when the vultures came seeking a nesting place there was a big cavity ready for them. They had slightly enlarged it, and now there were two hungry nestlings covered with white down lying on the bed of soft, decayed wood at the bottom. As the king vulture alighted on the edge of the nest the little ones welcomed him vociferously. Tearing the meat to bits, he fed first one gaping black beak, then the other.

In all the great family of meat-eating birds (the hawks, eagles, owls and vultures), the females are larger than the males, and, in some varieties, notably the national bird of the United States, the young birds at the age of three years appear to be larger than their parents. Then, in the fourth year, on the assumption of the plumage of maturity — marked by the white head and tail — they seem to become somewhat smaller.

Left alone, the big female vulture gorged herself, for well she knew there would be very little left of the meat by the time she could get to her nest and back again. Hence she was determined to eat her fill while the opportunity offered. When she had been feasting for nearly a half hour, her

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mate returned, and sailing down beside her, joined in the feast. Soon the male, turning from the carcass, picked up a small stick in his beak, and proceeded to play with it, tossing it up in the air and catching it, and hopping and jumping about it in a most ludicrous and awkward manner. After watching him a moment his mate joined him, jumping about, pulling at the stick and even rolling over on it, or thrusting her neck under it. At times they interrupted their play to chase away any of the black vultures which ventured too near. As it grew late and the sun approached the horizon, the two big birds, each tearing off a large strip of flesh, ran a few steps, sprang into the air, and winged off to their nest in the great tree on the mountain.

Instantly the black vultures dropped in a cloud upon the meat, tearing and fighting, and soon there was nothing left but the scattered bones. As the night fell they sailed away, one by one, those which were nesting going earliest, while many of the younger unmated birds stayed till the full darkness came, when they flapped up into the nearest trees and perched there for the night.

At the first gleam of dawn they were down at the bones again, seeking for a last scrap of

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"THE TWO BIG BIRDS . . . WINGED OFF TO THEIR NEST."

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flesh or hide. A little later the male king vulture came sailing back, his black wing feathers gleaming in the morning light. He quickly drove the black birds to flight, and when, still later, the puma came stealing down the mountain to see if by any chance there was some part of her prey which had been overlooked, he was the only bird on the rocks. She tried to stalk him, but he caught a glimpse of her when she crept around a mass of rocks. Walking to the edge of the low shelf upon which he was standing, he watched her until she was about to spring, when he leaped into the air. And though the puma rushed forward and sprang wildly, she missed him by at least two feet as he flapped up out of reach. She snarled wickedly at the great bird as he wheeled about just out of reach above her head. The vulture had often had the same experience, having robbed this puma on many other occasions, and he knew the exact height of her highest spring, as in fact did most of the black vultures, so he kept well above the danger-line, sailing tantalizingly around in short circles.

The puma eyed him savagely for a little, then sniffed among the debris. She found nothing left but bones, one or two of which she cracked open

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for the marrow, and, coming upon the skull, she gnawed through the temples into the brain cavity, whence she extracted a most toothsome mouthful, which was too well protected for the vultures. Feeling a little better over this, she went back into the jungle.

Winding her way among the great trunks, she came to a small, rapid, tumbling stream, up along the banks of which she went, picking her way most carefully, lest she disturb any possible victim which might be taking a morning drink. Coming around a bend, she noticed a great log lying on the bank. Her sharp eyes catching a movement just beyond the log, crouching flat she crept up and cautiously peered over. She saw a pair of tall, long-legged, hump-backed birds drinking, filling their beaks, then raising their heads to let the water run down their throats. Their heads were not unlike those of turkeys, lacking, however, the naked parts, combs and wattles of the domestic birds. They were trumpeters, or, as the natives call them, "waracabas."

Their prevailing color was a dark, purplish brown, but their faces and the lower parts of their throats and necks were a dull cobalt blue. The long, soft feathers which drooped from the back

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"SEIZING it she trotted away to her lair"

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over their wings and short tails were light gray, as were their long, slender legs.

The puma gathered her feet together under her, trod the ground lightly a few times, quivered a moment, raised one forefoot, and sailed over the log in a long, graceful leap. She struck down one of the birds as she alighted, and almost instantly leaped into the air after the other as it shot through the jungle on booming wings, making the forest resound with its loud, brassy notes of alarm.

Wasting little time on the fleeing bird, the puma darted upon the other, which, though its neck and limbs were broken by the blow of her strong fore-paw, was still flopping and tumbling about among the rocks and roots. Seizing it she trotted away to her lair. The kittens pulled and tore at the limp bird for a little time, but soon tired, and the great cat finished it while the kittens took their breakfast of milk.

Through the heat of the day the puma slept in the rocky den with the kittens, but when the midday shower had passed and the rain had been shaken from the leaves by the afternoon breeze, she bestirred herself to forage for another meal. Leaving the kittens sleeping, she went away around the mountain in the opposite direction to that of

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her last expedition. After a time she came to the foot of an enormous tree, and, hearing a slight sound, looked up just in time to see a large bird appear at the edge of a cavity or hollow in the trunk, where a great scar showed that a branch had been torn off.

She remained so motionless that she was not noticed by the bird, which, after looking about for a moment, spread its great wings and sailed away. She instantly recognized it as one of the king vultures, and a new gleam came into her eyes — a gleam of anger, vengeful and dangerous. Watching the bird until it was well out of sight, she walked to the foot of the great tree, crouched, and sprang up it like a flash. Up she went until she came to the cavity, which was so large that she could easily stand upright within it. Climbing in, she made short work of the downy young birds, though their strong odor of decayed flesh was not greatly to her liking. Then turning around, she crouched in the nest to wait. In a short time there was a rustle of stiff wing feathers as the male vulture sailed down to his nest. As he was about to alight, the puma lunged forward, striking and clutching at him. He could not quite escape, but threw himself backward so that the

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puma's claws only raked his breast, tearing away the skin and ripping great gashes in the powerful pectoral or flight muscles. Stunned by this sudden attack, he fell almost to the ground, when, managing to right himself, he flapped painfully a little way through the forest and alighted upon a big rock.

The puma had almost thrown herself out of the nest in her eager lunge. Scrambling down the trunk as rapidly as she could, she raced away after the wounded bird. As she reached the rock the vulture flapped off, flying low and heavily. Under him raced the puma, keeping pace with the dazed and lumbering bird. Presently, weakened from loss of blood, the king vulture came too close to earth, and the puma leaped upward for him when he had been feasting on one of her kills. But this time she was successful. Striking him down, she cut his throat with one snap of her sharp white teeth.

The wide-winged monarch of the vultures had tyrannized over his black subjects for the last time.

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The Green Dragon

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The Green Dragon

IT was the season of heavy rains in British Guiana. Each day when the heat of the noonday sun was at its highest, the quick-rising, massive, silver clouds came rolling up, often accompanied by violent thunder and brilliant lightning, and the sudden, short, tropical storm would pour down, drenching the thirsty jungles. Although the rainy season was but two weeks old, already the trees and vines were covered with a riot of young leaves, and down among the roots was heard the steady patter of dead leaves, pushed off by the quick-growing shoots. The dull gray green of the late dry season was rapidly changing to the bright yellow green of the tropical spring time. The cold-gray tree-trunks were acquiring a soft, greenish tinge where the misty filaments of fine, moss-like fungus sent forth fresh fronds.

On the ground among the roots the moisture caused the fallen seeds to germinate and send forth tiny green sprouts, which pushed their way up through the carpet of dead leaves, giving a greenish cast to the entire jungle floor. Most of these

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shoots would flourish on the moisture for a few weeks, then, finding that no tiny rays of sunshine could reach down to them through the dense, tangled mass of foliage, would weaken and decay, and further enrich the deep mulch about the roots of the monster trees and vines.

The varied notes of birds rang with a new quality, the mating and nesting tone. The moulting season was past and the singers were clad in bright new liveries of many hues. The beasts and reptiles, too, after the lethargy of the hot, rainless time, felt a new vigor, and went searching up and down the jungles, hunting for their mates, choosing nests, burrows, dens, whatever situation they liked best for their home-making.

The spotted jaguar mounted a great rock which jutted out of the bank of the river, and sent out his crashing, barking roar in the same exuberance of spirit that caused the tiny anolis lizard, sitting on the leaf of the giant eta palm, to raise his head, and, projecting his curiously elastic pink dewlap, to bob up and down with the faintest clicking noise, the only sound which he was capable of producing. The lovely little iridescent humming-birds buzzed about, their bright, metallic gorgets flashing in the sun, as they danced in the air before their more

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"THE BEASTS AND REPTILES, TOO . . . FELT A NEW VIGOR."

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sober-hued mates. The great harpy eagle raised his curious crest, spread his big barred tail and wings, and, throwing back his head, laughed out his hysterical cry as he watched his powerful mate bearing a long, dead branch away to the top of the tree, which was to be their nesting site. It was springtime in the jungle. The time of buds and blossoms, of nests and eggs, of dens and cubs.

Up near the top of a great tree, overhanging the river, a big branch had been snapped off, leaving a broken stub projecting over the water. A colony of termites had discovered the break and had promptly covered the end of the stub with one of their big, thatchlike, dome-shaped nests, about three feet in diameter and perhaps two feet in height. It was composed of tiny particles of decayed wood, cemented together by the saliva of the ants, and was threaded through every part with tunnels, passages and cells. Now it was deserted, its builders having fallen prey to a tamanda, the anteater of the middle jungle.

One day there came, fluttering from tree to tree along the bank of the river, a flock of nine little blue-headed parrots. At rest they appeared a solid leaf-green in color, with purplish blue heads, but

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when in flight the deep blackish blue of the under wing-coverts gave them an almost black appearance. The leaves of one of the jungle trees, upon the fruit of which these parrots feed, are of almost the exact proportions and color of the folded green wing or the breast of the sitting bird, and hang at the exact angle at which the parrots sit on the twig, so that the little fellows look like bunches of two or three of the leaves, their blue heads resembling, at a little distance, the shadowy spaces in the foliage. Then, when they fly into another near-by tree with different foliage, they are silhouetted against the sky, and their forms are exactly like those of the larger leaves. They know well the value of their protective coloring, for when one of the many falcons, which are everywhere over the jungle, makes a stoop at them, they dart to one of these trees, and, alighting, sit motionless. Though the hawk may dash past within a few feet, he is very rarely able to separate them from their surroundings.

The little flock of these blue-headed parrots came to the empty nest of the termites and proceeded to inspect it with the greatest care, talking and gabbling together with a variety of soft notes, the chief of which was a low anh, h, h, somewhat

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"TALKING AND GABBLING TOGETHER WITH A VARIETY OF SOFT NOTES."

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like one of the questioning notes of a house cat. When, however, they became excited, which often happened, they would yell and screech, making a great racket. This would last but a few moments, when they would again resume their ordinary conversational tones.

They clambered about over the rough nest, breaking off bits here and there with their strong, hooked beaks, and watching closely to see if any of the termites came to repair the break. Seeing none, they apparently came to some decision, for they all flew away to a neighboring tree-top to seek the fruit on which they depended for existence. In the jungles, fortunately for the wild things, there is no time when some tree is not bearing fruit, and many, like the wild orange, have ripe fruit and flowers at the same time.

The little flock tarried in the vicinity, making frequent trips to the big thatch. Then came dissension. Of the nine little green birds, four were females and five males, and, while they were quickly divided into four pairs, the odd one had a most strenuous battle with each of the other males before he would consent to remain a bachelor. There were many little struggles, and many changes in the personnel of the pairs before the weakest

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one was singled out and forced to retire, which he did with very bad grace, and to only a short distance, hanging about in the near-by trees, apparently waiting until some mischance might make one of the dainty little females a widow.

In a very few days the mated pairs began to dig their burrows deep into the empty ants' nest, finding the porous mass very easy to penetrate with their strong, curved beaks. They dug tunnels about two inches in diameter into the side of the dome for a distance of nearly a foot, then hollowed out little round rooms of perhaps six inches in width. Within a few days after the completion of these nesting cavities there were three or four little white eggs in each, and the long days of incubation began.

A time of danger followed, for, while the long, narrow passage was, for the most part, a sufficient protection, there were one or two enemies against which it would be no safeguard.

The jungle has no secrets from the jungle people. They search up and down, over and under, everywhere, seeking the hiding-places of their prey, or shelter from their own foes. Every fallen leaf is sniffed at, or peered under, lest it hide a victim or be the lurking place of a foe. Each hollow

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branch is explored, and the big thatch was no exception.

Late one afternoon, after the rain had ceased for that day, a little band of marmosets came to the tree, and at once set about examining the big nest. They climbed all over it, peering into the tunnels made by the little green birds, and reaching as far in as their slender arms would go, twittering and whistling their soft, plaintive notes. The male parrots fluttered about overhead, screeching and scolding, and dashing as near the little monkeys as they dared, keeping, however, just out of reach. The females kept to their nests, and for the most part paid no attention, trusting to the depth of the tunnels for safety.

In one nest, however, the mother-bird resented the intrusion, and, coming near the entrance, waited till a tiny paw came within reach, when she bit it sharply. The little monkey screamed out with the pain, and the rest of the nervous, excitable band taking the alarm, all went racing away over the jungle, followed for some distance by the maledictions of the vociferous little parrots.

Occasionally a jacamar would alight on the nest to watch for passing beetles or butterflies, its beautiful iridescent plumage gleaming in the sun, or

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one of the jewelled humming-birds would dart past, flashing like a meteor. And there were always the hawks.

The males had to race for their lives at various times to escape the dash of a streaked falcon, which had a nest of its own in a tree a short distance down the stream. He would sail out of his tree and begin his short spirals, swinging round and round, gradually going higher and higher, until the startled birds and lizards would begin to think he had gone, and would look out from their hiding-places where they had hurled themselves in their first terror. Then he would swing away, on ever-increasing circles, out over the broad jungle, watching sharply to see if some careless little creature might show itself for a moment above the green jungle roof. After a little, if nothing better offered, he would partly close his wings and come sweeping down like an arrow until just above the tree-tops, when he would dash along at full speed, dodging the taller trees, darting this way and that, hoping to startle some little bird into showing itself. If this method of hunting had no results, he would sweep, still at top speed, into the cañon formed by the huge trees lining the banks of the river, hoping to levy toll on a colony of cassiques,

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"A BIG, RINGTAILED COATIMONDI OFTEN TOOK IN THE BIG NEST."

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whose long nests were suspended from the branches of a great tree overhanging the water. Failing here, he would go on his way down the river to call at a number of other bird colonies and gathering-places of which he knew, among them the thatched nest occupied by the parrots. Seldom was such a trip unsuccessful, for, if he made a catch at none of these happy hunting-grounds, he would usually surprise and seize some rash bird which had ventured to fly across the river.

There was a big black and white red-crested woodpecker which would occasionally come hopping up the branch to the nest in search of beetles or borers. The little parrots would dash at him, making a great show of attacking him, but he would dodge around to the other side or under the big limb, seeming to enjoy the joke, for he might easily have worsted any of the parrots in a real fight, being more than twice as large and much more agile.

Once a tiny cyclothurus (little woolly anteater) explored the thatch, but, finding that it was empty of the termites, which are his favorite food, he soon took himself off. A big, ringtailed coati-mondi often took in the big nest in his nightly rounds, in the hope that he might catch one of

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the little green parrots asleep, but they kept safely hidden. There were many other visitors, harmless and otherwise, but it was not until the eggs began to hatch that anything seriously disturbed the colony.

At the base of a small tree which leaned at a sharp angle out over the river, directly under the home of the little colony, was the entrance to a burrow. About eight inches in diameter, it led down between the roots of the little tree for a distance of six or eight feet through the sandy soil, to an enlarged room or cavity perhaps two feet in diameter.

Every morning, when the sun had dried the dew from the leaves of the tree-tops far overhead, the Green Dragon would crawl forth from the entrance of this burrow, which was his lair.

He was leaf-green in color, with a few whitish markings about his cheeks and faint brownish bands on his long, whip-like tail. About four feet in length from nose to tip of tail, he was a vision of horror to all the little dwellers of the jungle.

For the most part he spent his days among the branches of the little tree, eating the tender young leaves which were springing forth with wonderful rapidity. He occasionally varied this fare with a

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trip to one of the near-by fruiting trees, and he was always seeking, prying everywhere for baby birds or beasts or nests containing eggs. These were his favorite food, the leaves and fruit being merely to relieve his hunger when he could not find the more tasty morsels.

Soon after the first family of young parrots were hatched in the big thatch-nest, the great iguana, lying lazily across the twigs at the top of the little tree just below, noted the unusual activity of the parent birds as they fluttered in and out, carrying food to their newly-hatched young. Slowly rearing himself, he looked around as though to figure out the easiest path, then scrambled across from branch to branch to the trunk of the larger tree. Cautiously he ascended, stopping every few moments to look about and listen. Coming to the broken branch, the great lizard, truly a dragon to all the little creatures of the jungle, raised himself upon it and climbed up the long slope to the nest. His coming caused the wildest alarm among the parrots, and when the great, green brute mounted the thatch, the whole flock flew at him, screeching and chattering at the top of their voices.

Paying no heed to their demonstrations, he nosed

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about the big nest, sniffing here and there, and raking with his claws at the hard crust. Fortunately for the eggs and young birds within he did not discover the entrances, as they were well down the sides, near the bottom. The parrots flew back and forth, dashing as near the iguana as they dared, but after a little, seeing that he did not find their nests, the little mother-birds, one by one, with great courage, slipped into their burrows and the incubation proceeded.

The mother whose eggs had hatched soon slipped out again, and, after a few futile dashes at the big, green lizard, flew away to the fruit clusters of a near-by tree. Soon returning with her beak filled with the fruit, she again slipped into her nest.

All through that day's downpour and till nearly sunset the lizard kept his station, lying quietly for the most part, but occasionally snapping at one of the little parrots which ventured near. A little before the end of the day he retreated down the limb and trunk to the ground, and thence to his den beneath the roots, stopping on the way to eat a few plums lying under a cashew tree.

The next day he went again to the nest, and, save for a few hours when he was eating leaves and fruit, spent all the day stretched out upon the thatch, a

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"ALL THROUGH THAT DAY'S DOWNPOUR . . . THE LIZARD KEPT HIS STATION."

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constant menace to the little colony. And each day thereafter he repeated the program.

One day, when he was eating fruit in a near-by tree-top and the anxious little mother birds were making the most of their brief respite — for the other broods were all hatched now, and there were many hungry little mouths to feed,— they heard a curious soft, dry rustling on the branch. It soon came nearer, and a slender, pointed head, followed by a sinuous, elongated body, slid slowly along the branch into view. It was the long, green tree-snake of the South American jungles.

Full five feet in length, it was no more than three-fourths of an inch in diameter at its largest girth, and the slender neck was little if any larger than a lead pencil. The attenuated tail was drawn out to a point as small and fine as that of a mouse, and its pointed head resembled a lance. Of a bright green in color, shading to yellowish cream on the under side, it was a most graceful though sinister object. It glided quietly along the thatch, mounted it, and began an inspection.

Thrusting its head over the edge, it quickly found an entrance to one of the little burrows, and, after a pause, the long head and neck slid in. Just at this moment the little male parrot, whose nest

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was so calmly entered, returned with a beak laden with fruit for his hungry nestlings. Seeing the body of the snake just as he was about to alight, he gave a shriek, and dropping the fruit, flew rapidly away.

At almost the same moment, the big iguana came crawling lazily along the branch. Not noticing the slender form, he clambered up to his accustomed watch-tower, treading heavily upon the tail of the serpent with one of his sharp-clawed feet.

Like a flash the head and neck reappeared, and reared up, threatening the big lizard. For a moment the iguana stood motionless, watching the slender lance-shaped head swaying just before his eyes, then he gave a mighty leap and sailed down through the air. Brushing a few twigs and leaves in his fall, he came down, a sheer drop of seventy-five feet, to the surface of the water. Instantly recovering himself he swam like a flash to the shore, raced up the bank, and into his den. The snake lay with raised threatening head for a few moments, then once more turned his attention to the interior of the nest. After some time the head was again withdrawn, and the long mouth held the limp form of the mother parrot between its

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"HE GAVE A MIGHTY LEAP AND SAILED DOWN THROUGH THE AIR."

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jaws, the short poison-fangs of the snake having quickly stilled her struggles. Slowly the soft, elastic neck of the snake expanded and the plump little body of the bird slid smoothly down.

A little later the lance-shaped head once more entered the tunnel, and when it came out the three little bulges in the slender neck showed where the nestlings had gone to follow their mother.

This making a most substantial meal for the snake, it turned down the big limb, and away back into the endless, leafy jungle-roof, to hide and digest its dinner. Then came the rain, pouring down until the entire jungle was once more washed clean.

After a few days, the Green Dragon again took up his station on the dome of the big nest.

As the days went on, the birds grew more and more accustomed to the big, quiet lizard, and took greater and greater chances. One day one of them flew down a little too close, and like a flash, the seemingly sluggish creature was upon it. Seizing it in his powerful jaws, he shook it as a terrier would shake a rat. It struggled a little, and then, as its struggles ceased, the big beast swallowed it, feathers and all. For a day or two the mate of the little victim bore her burden of feeding the

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family, then, leaving the nest, she flew away and was gone for several hours. When she returned, a little male parrot came with her. Whether it was the mate of the one which the snake had captured or not it is impossible to tell, but he took up the burden of feeding the young as vigorously as if he had been their real instead of their foster parent.

The Dragon was waiting for the harvest, and a week or two later it came. One day the family of nestlings which had been the first to hatch, and had grown rapidly, despite the irregularity of their feeding, felt that the time had come for them to look out upon the world. The most adventurous of these, in the absence of both parents, came to the entrance of the nest. Close behind came one of his brothers. They were almost as big as the old birds, and the narrow passage was hardly large enough for two of them to sit abreast. So when the one in the rear, finding his view obstructed, gave the other a little peck, the first climbed out and clung at the entrance while his little brother had his first view of the world. Just as he looked out, he was surprised, though not much frightened, to see a big, green reptilian head reach down from above, seize his brother and disappear with him.

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A little later the second baby bird was crowded out by a third, and again the big lizard feasted.

After this, at intervals of three or four days, the Dragon took toll of the nestlings until the last nest was empty. Not more than two or three young birds out of the fifteen escaped, and those — the last ones to leave the nests — happened to come forth during the short absences of the iguana.

One day, after the last of the little parrots had left the vicinity, the big lizard was lying stretched out on the dome taking a sun bath. He swung his great head to one side to watch a humming bird buzzing near, when out of the sky behind him dropped a huge, feathered shape. Long talons, sharp as needles, pierced him through and through. Struggling desperately, biting and clawing and lashing with his strong whip-like tail, he was swung away, snatched out of life by the great harpy eagle, just as he had snatched the venturesome nestlings. Once more the big, thatch-like dome of the termites was empty and deserted, as though nature had placed some ban upon all the jungle children who might take up their abode therein.

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The Crested Robber

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The Crested Robber

LIKE some terrible green flood defying the laws of gravitation, the jungle sweeps over the eastern foothills of the Bolivian Andes. At one point in the limitless expanse a shoulder of black rock heaves itself above the surface, as if trying to stem that silent, seething tide of vegetation. Down a cleft in the sheer front of this rock bastion a stream plunges, in a succession of mad leaps, into a little, lost lake that cowers back against the foot of the cliff as if in terror of the thirsty jungle, which surges in on it from three sides.

High up in a spring-cooled rift of the rocky wall grows a large wild fig-tree, whose flat roots sprawl out in every direction, seeking the deposits of earth in the tiny irregularities and cracks in the face of the cliff. Here, at the time of this story, a pair of the beautiful and savage harpy-eagles — the crested robber and his mate — had made their nest. It consisted of a great platform of sticks and brush, built between the tree and the rock, where some of the roots formed a secure base, and in a slight depression in the centre lay two large white eggs

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slightly mottled with brown. On guard at the edge of the nest stood the two magnificent birds, tyrants of the upper jungle. The male eagle had brought his mate a small sloth, which he had picked from under the branch where it hung suspended in a compact, pear-shaped bunch, trusting to its resemblance to a mass of orchid-roots for protection from its many enemies. Together they had torn and devoured it, and now they were wiping their great, powerful beaks and preening their plumage. This done to their satisfaction, the female stepped over to the depression and slowly settled down over the eggs to continue the process of incubation.

Her mate, a strikingly beautiful bird, slightly smaller than herself, sat for some time looking out over the water and peering into the recesses of the jungle. His large brown eyes, which glanced keenly out from under the overhanging brows, were set in a light grayish face, the flaring feathers of the cheeks forming a frame; and on the top of his head the divided white-tipped black crest rose and fell as he noted the movements of the water-birds flying up and down the lake. His cloak of dark-brown feathers covered his shoulders and back, coming together under his chin and disclosing the cream-white breast and mottled thighs and

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"WHICH HE HAD PICKED FROM UNDER THE BRANCH WHERE IT HUNG."

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massive, powerful legs and talons, and the strikingly barred tail of brown and cream gave the finishing touch to this most royal of birds.

After a time he spread his broad, rounded wings and sailed down across the lake close to the surface of the water, then into the deep, dark jungle, where he circled about among the great trunks of the trees on the lookout for any movement among the branches. Seeing none, he swung up to a dead branch, and, alighting, looked sharply about.

At the foot of the little lake the water spreads out among the clutching, sprawling roots of the jungle until it is impossible to say where the shore begins and the water ends. Knitting root to root, matted vines and tangled lianas pursue their serpentine way. Except over the deepest part at the foot of the cliff, the water's surface is spread with blue-flowered water-lilies, water-hyacinths, cabomba, and many kindred flowers. Above this brilliant carpet fly many varieties of water-birds — hyacinthine gallinules, dendrocygnas, jacanas with curious feet and spur-wings, many kinds of ducks, herons and ibises, and occasionally a beautiful black-necked regal swan, a visitor from the streams and lakes of the pampas.

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Many years ago there grew, near the foot of this lake, a giant mora-tree, which reached a height of perhaps one hundred and seventy-five feet, its branches overtopping the surrounding forest. In one of the violent thunder-storms, which are of almost daily occurrence during the rainy season, this giant tree was struck by lightning, which shattered the massive trunk for over a hundred feet and hurled it to the ground, leaving only a great stump about sixty feet high.

Some time later, when the termites and wood-beetles had begun their work of destruction, one of the fruit-eating cotingas, beautiful birds of the tropics, dropped on the top of the stump a seed of the clusia, that terrible boa-constrictor among plants, whose powerful roots will choke the life out of any tree. There the seed sprouted, and as the years went by it grew larger and larger, sending its great flat, irregular roots flowing down on all sides of the stump till they reached the ground. Whenever two roots came in contact with each other they grew together into one mass, until finally the stump was almost entirely shut in by the wall of roots, which enclosed it like some great, many-armed octopus.

There were, at the time of which I write, two

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small openings in the wall of roots some twenty-five feet from the ground. These led to a cavity, where a portion of the old stump had rotted away and left a roomy space that was sheltered by the surrounding wall of roots. In this cavity an ocelot, that beautiful mottled cat of the tropics, had found a fairly safe and comfortable home.

There were now two pretty spotted kittens curled asleep on the mass of soft decomposed wood-fibre at the bottom of the cavity. The mother ocelot was lying stretched along a great liana, which swung across just below the entrance to the den, watching for some chance bird or beast that might come within reach of her spring. She waited there for some time, but nothing stirred below her; so, lazily rising, she stretched, yawned, and after looking carefully around in all directions started off down the liana.

These lianas, or bush-ropes, are great vines of the tropical forests, which sometimes grow to be as thick as a man's body and extend for more than a mile through the trackless jungle, binding the trees together with a network that is almost impenetrable. They form highways, literally highways, for the monkeys, sloths, ant-eaters, and others of the tree-dwellers.

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Travelling from branch to branch through the trees, the cat came to a tree standing in the water at the edge of the lake, found a thick limb projecting low over the water, and, crouching among the orchids and air-plants, waited for some one of the water-birds to come within reach. She had not long to wait, as, in fact, she rarely had, for the amount of wild life in these great jungles is amazing, and here the predatory ones among nature's children do not often go hungry.

A pair of regal swans — snow-white save for their jet-black heads, necks and feet and rosy blotch on the bills — came flying high over the forest. Far from their usual haunts they had come, blown astray by a violent wind-storm. Down to the lake they swung, glad of the quiet spot in which to rest, and with feet stretched out in front of them struck the water, slid along the surface, and settled down with their heads well up, on the lookout for possible enemies. Nothing disturbing them, they swam slowly in toward the trees and climbed out on some projecting roots but a short distance from where the ocelot was lying, eagerly watching them.

Well screened by vines and leaves, the ocelot crept down to the base of the tree, and quickly

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"THE OCELOT DRAGGED HER PREY WELL OUT OF THE WATER."

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worked her way in and out over the matted roots and fallen branches, among which gleamed the black water, until she was behind the trunk of the tree upon the roots of which sat the nearest of the unsuspecting swans, preening its rumpled feathers after the long flight.

The matted, buttressed roots spread out in all directions like gnarled fingers, some of them arching four or five feet out of the water. Leaping lightly across an open lane of water, the ocelot crept cautiously around the great tree and made her way swiftly in the direction of the birds. Now but one root about two feet high was between her and her prey. Gathering her feet well under her she sprang on to and over the root and was upon the swan before it could realize what was happening. One swift bite broke its neck, but in its dying struggle its wings buffeted the cat severely, and though she held it with all her strength it tumbled into the water, nearly dragging her in also. The other swan flapped wildly off, half flying, half swimming, until it was far out on the lake.

The ocelot dragged her prey well out of the water, then carefully smoothed her fur, as a house-cat might, for in her struggles with the swan she had been splashed with water. Then, getting a

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good grip, she picked up the bird and started for the den in the stump.

The swan was a large and heavy one, and the cat being no larger than a small bull-terrier found her quarry about as much as she could conveniently manage. Therefore, not being able to jump and not liking to swim, she took a roundabout way over the roots, half dragging and half carrying the body of the swan, until she came near to the base of the home tree and climbed a sloping trunk, from which a giant liana swung across just below the entrance to the den.

Out across this living suspension-bridge she started with her heavy load, calling to her kittens. Both promptly put their heads out of the hole and mewed hungrily, eagerly watching her labored progress.

It was at this moment the mother ocelot came within range of the keen eyes of the harpy-eagle watching the jungle from his dead branch. Without an instant's pause the bird flew to the attack. The cat caught sight of it as it left its perch, and, though furious at being robbed of her hard-won prey, dropped it, snarling savagely, sprang for the hole in the tree, and disappeared. The eagle sailed down to where the swan had fallen, picked it up in

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"BEFORE THE EYES OF THE RIGHTFUL OWNER IT PROCEEDED TO MAKE ITS MEAL."

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its great talons, and with great difficulty flapped up onto the liana; and there before the eyes of the rightful owner it proceeded to make its meal. It ate about one-third of the swan before it was satisfied. Then, taking a firm grip with its powerful feet in the limp, draggled form, it flew away through the forest, out across the lake and up to the nest.

After a little time the mother ocelot, watching warily lest the eagle return, slipped out and down the liana to the ground, smelling about among the dead leaves and branches for any scraps the robber might have left, now and then snarling angrily as she nosed the feathers. Finally she started off through the jungle for something to replace the stolen swan. Then the ants and flies and carnivorous beetles came trooping to the banquet of drops of blood and tiny bits of flesh still remaining on leaf and twig, and soon all stains from the crested robber's feast were removed.

THE END.

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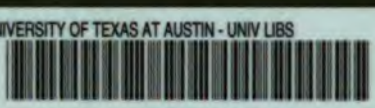

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